F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	1	71

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAYS

NORTH AND SOUTH CHANNEL BRIDGES
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

MAINE FEDERAL AID URBAN
PROJECT NO. BRF-U-025-2(23)
PROJECT LENGTH 0.201 MILES

As Built 7-8-77 DAE

CONVENTIONAL SIGNS

COUNTY LINES	TRAVELLED WAY - PROPOSED
TOWN LINES	UNDERGROUND UTILITIES - EXISTING
PROPERTY LINES	UNDERGROUND UTILITIES - PROPOSED
R/W LINES - EXISTING	RAILROAD - SINGLE TRACK
R/W LINES - NEW - ACCESS CONTROL	RAILROAD - DOUBLE TRACK
R/W LINES - NEW - NO ACCESS CONTROL	UTILITY POLE - EXISTING
CULVERT - EXISTING	UTILITY POLE - JOINT OCCUPANCY
CULVERT - PROPOSED	PROPOSED UTILITY POLE - TEMPORARY
CURBING - EXISTING	PROPOSED UTILITY POLE - PERMANENT
CURBING - PROPOSED	TREES (hardwood, softwood)
TRAVELLED WAY - EXISTING	WOODS

SPECIFICATIONS

DESIGN — AASHO Standard Specifications for Highway Bridges 1973 and interim specifications 1974.

CONTRACT–State of Maine, State Highway Commission, Standard Specifications, Highways and Bridges, Revision of June 1968.

DESIGN LOADING

LIVE LOAD = HS 20–44

MATERIALS

CONCRETE . . . . . Seal Class S
All Other class A

REINFORCING STEEL . . . . . ASTM A615, Grade 60

BASIC ALLOWABLE STRESSES

CONCRETE f_c=1200 psi n=10

REINFORCING STEEL f_s=24,000 psi

INDEX OF SHEETS

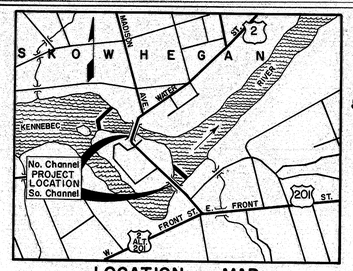
1.		TITLE SHEET
2.-3.		TOTAL ESTIMATED QUANTITIES
4.		FOUNDATION SURVEY-NORTH CHANNEL
5.		FOUNDATION SURVEY-SOUTH CHANNEL
6.		BORING DETAILS-SOUTH CHANNEL
7-25.		NORTH CHANNEL BRIDGE
26.-39.		SOUTH CHANNEL BRIDGE
40.		HIGHWAY BETWEEN BRIDGES
41.		NORTH CHANNEL APPROACH
42.		TYPICAL SECTIONS
43.		DRAINAGE
44.		WHEEL CHAIR RAMPS
45.		CONSTRUCTION NOTES
46.		PROFILE
47-55.		CROSS SECTIONS
56-58.		RIGHT-OF-WAY MAPS

STANDARD DETAILS – BRIDGE

59.	BD 100-71	BEARING PEDESTALS
60.	BD 104-73	ARMORED JOINTS, DRAINS, SHEAR CONNECTORS
61.	BD 105-74	EXPANSION DAMS
62.	BD 113-72	DIAPHRAGMS & CROSS FRAMES
63.	BD 115-73	ALUMINUM RAILING
64.	BD 116-73	PALE PANEL & HEAVY DUTY POST
65.	BD 118-73	ALUMINUM APPROACH RAILING

STANDARD DETAILS - HIGHWAY

66.	(1)	CATCH BASINS AND MANHOLES
67.	(2)	METAL SLUICE, UNDERDRAINS
68.	(3)	CURB, DITCHES, SLOPES
69.	(10)	FENCING
70.	(11)	BARRICADES, WARNING SIGNS
71.	(12)	DRIVEWAY DETAILS, FIELD OFFICES



LOCATION MAP

600 0 600 1200
Scale of Feet

NOTE: ALL WORK CONTEMPLATED UNDER THIS CONTRACT SHALL BE GOVERNED BY AND IN CONFORMITY WITH THE STANDARD SPECIFICATIONS (REVISION OF JUNE 1968) AND SUPPLEMENTS THERETO EXCEPT AS MODIFIED ON THE PLANS AND IN THE SPECIAL PROVISIONS.

NOTE: Names of Bridges were changed to "Margaret Chase Smith Bridges North & South" by a resolve of the Legislature in July 1977. (H.P. 1607-L.D. 1897)
DAE 6-11-81

TRAFFIC DATA

		No. Channel	So. Channel
A.D.T.	1975	14,365	14,340
A.D.T.	1995	30,015	29,740
D.H.V.		3,300	3,270
T. (%)		7	7
D. (%)		50	50
V.		25	25
P.S.D. (%)		0	0
18 KIPS		1153	1153

HYDROLOGIC DATA

	North Channel	South Channel
Drainage Area	3,950 sq. miles	3,950 sq. miles
Q 50	80,640 cfs	47,360 cfs
Design High Water	152.5 ft.	162.5 ft.
Velocity	18.2 fps	7.8 fps

NOTE: The drainage area (3950 sq. miles) is the total area for both the North and South Channel Bridges.

STATE OF MAINE
RICHARD A. LUETTGEN, SR. 17251 REGISTERED PROFESSIONAL ENGINEER

APPROVED:
STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
Kogan D. Mahn — COMMISSIONER — DATE Dec. 1, 1975
Richard A. Luettgen — CHIEF ENGINEER (BUREAU DIRECTOR) — Dec. 1, 1975

COAST GUARD PERMIT REQUIRED

UNITED STATES
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 1

APPROVED:

DIVISION ENGINEER — DATE

JANUARY 1968

167-122

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	2	71

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	No. Channel QUANTITY	So. Channel QUANTITY	Approaches QUANTITY	TOTAL QUANTITY
201.14	Removing Single Trees, over 24" to 48", Tops only	Each	—	—	1	1
201.19	Removing Stumps, 9" to 24"	Each	—	—	1	1
201.20	Removing Stumps, 24" to 48"	Each	—	—	1	1
202.0801	Removal of Building No. 1	L.S.	—	—	1	1
202.1001	Removal of Existing Superstructure, (Property of Contractor)	L.S.	1	—	—	1
202.1002	Removal of Existing Superstructure, (Property of Contractor)	L.S.	—	1	—	1
202.13	Removal of Existing Railings (Retained by Department)	L.F.	—	146	—	146
203.20	Common Excavation	C.Y.	—	—	3250	3250
203.25	Granular Borrow	C.Y.	260	—	—	260
206.06	Str. Earth Excav. - Drainage & Minor Strs.	C.Y.	—	—	180	180
206.07	Str. Rock Excav. - Drainage & Minor Strs.	C.Y.	—	—	80	80
206.08	Str. Earth Excav. - Abuts. & Rel. Walls	C.Y.	60	130	—	190
206.09	Str. Rock Excav. - Abuts. & Rel. Walls	C.Y.	160	140	—	300
206.10	Str. Earth Excav. - Piers	C.Y.	—	390	—	390
301.09	Plant Mix Bituminous Base Course, Grading B	Ton	—	—	460	460
304.10	Aggregate Subbase Course - Gravel	C.Y.	—	—	2970	2970
305.10	Pre-mixed Bituminous Base	C.Y.	—	—	160	160
403.07	Hot Bit. Pavement, Grading B	Ton	—	—	290	290
403.08	Hot Bit. Pavement, Grading C	Ton	—	—	210	210
403.101	Hot Bit. Pavement, Grading D (Sidewalks, Drives, Etc.)	Ton	—	—	180	180
403.121	Hot Bituminous Pavement, Grading E (Shimming)	Ton	—	—	25	25
410.161	Cover Coat Material, Sand (Leveling)	C.Y.	—	—	30	30
502.21	Structural Concrete, Abuts. & Retaining Walls	C.Y.	256	165	—	421
502.23	Structural Concrete, Piers	C.Y.	—	210	—	210
502.24	Structural Concrete, Piers (Placed Under Water)	C.Y.	—	580	—	580
502.2601	Structural Concrete, Roadway & Sidewalk Slabs on Steel Bridges	L.S.	1	—	—	1
502.2602	Structural Concrete, Roadway & Sidewalk Slabs on Steel Bridges	L.S.	—	1	—	1
502.2901	Structural Concrete, Wearing Surface on Bridges	L.S.	1	—	—	1
502.2902	Structural Concrete, Wearing Surface on Bridges	L.S.	—	1	—	1

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	No. Channel QUANTITY	So. Channel QUANTITY	Approaches QUANTITY	TOTAL QUANTITY
503.12	Reinforcing Steel, Fab. & Delivered	Lb.	62,600	119,510	—	182,110
503.13	Reinforcing Steel, Placing	Lb.	62,600	119,510	—	182,110
504.7101	Structural Steel, Erection	L.S.	1	—	—	1
504.7102	Structural Steel, Erection	L.S.	—	1	—	1
505.0801	Shear Connectors	L.S.	1	—	—	1
505.0802	Shear Connectors	L.S.	—	1	—	1
507.09	Steel Pipe Hand Railing	L.F.	27	—	—	27
507.143	Aluminum Bridge Railing, Type "C"	L.F.	315	701	—	1016
507.154	Aluminum Approach Railing, Type "D"	L.F.	54	38	—	92
510.1201	Special Detour, 22± Foot Roadway Width Vehicular & Pedestrian Traffic Separated	L.S.	1	—	—	1
510.1202	Special Detour, 24 Foot Roadway Width Vehicular & Pedestrian Traffic Separated	L.S.	—	1	—	1
511.07	Cofferdams	L.S.	—	1	—	1
512.06	French Drains	C.Y.	19	—	—	19
514.06	Curing Box for Concrete Cylinders	Each	0.3	0.7	—	1
515.20	Protective Coating for Concrete Surfaces	S.Y.	940	1565	—	2505
603.159	12 Inch Culvert Pipe, Option III	L.F.	—	—	190	190
604.072	Catch Basins Type A1-C	Each	—	—	1	1
604.082	Catch Basins Type A2-C	Each	—	—	2	2
604.161	Altering Catch Basins	Each	—	—	2	2
604.18	Adjusting Manholes & Catch Basins to Grade	Each	—	—	1	1
604.252	Catch Basin, Type A5-C	Each	—	—	1	1
605.09	6 Inch Underdrain Type "B"	L.F.	—	—	302	302
607.16	Chain Link Fence - 4 Feet	L.F.	—	—	6	6
607.17	Chain Link Fence - 6 Feet	L.F.	58	—	—	58
607.24	Remove and Reset Fence	L.F.	—	—	50	50
607.36	Bracing Assembly, Type 1-Chain Link Fence - 6 Feet	Each	3	—	—	3

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED		
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

JANUARY 1988

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
AND
SOUTH CHANNEL BRIDGE
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY
ESTIMATED QUANTITIES

SHEET OF AUGUSTA, MAINE

167-123

F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	3	71

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	No. Channel QUANTITY	So. Channel QUANTITY	Approaches QUANTITY	TOTAL QUANTITY
607.37	Bracing Assembly, Type 11-Chain Link Fence-6 Feet	Each	2			2
609.11	Vertical Curb-Type 1	L.F.			649	649
609.12	Vertical Curb-Circular-Type 1	L.F.			65	65
609.13	Vertical Bridge Curb-Type 1	L.F.	272	698		970
609.14	Vertical Bridge Curb-Circular-Type 1	L.F.		12		12
609.23	Terminal Curb, Type 1	Each			35	35
609.32	Curb Type 3a	L.F.			12	12
615.07	Loam	C.Y.			25	25
616.08	Sodding	S.Y.			45	45
618.13	Seeding, Method Number 1	Unit			4	4
619.12	Mulch	Unit			14	14
623.06	Right-of-Way Monuments	Each			1	1
623.08	Bronze Pin Markers	Each			11	11
623.102	Remove, Store and Reset Monument	L.S.			1	1
629.05	Labor, Straight Time	M.Hr.	10	10	20	40
	Traffic Officers	M.Hr.			85	85
631.10	Air Compressor (inc. operator)	Hour	5	5	5	15
631.11	Air Tool (inc. op.)	Hour	5	5	5	15
631.12	All Purpose Excavator (including op.)	Hour			10	10
631.171	Truck-small (inc. op.)	Hour	5	5	10	20
631.22	Front End Loader (inc. op.)	Hour			10	10
632.08	Warning Lights	Grp.	1	1		2
633.09	Portable Barricade	Each	2	2		4
637.07	Sprinkling	M.G.			30	30
637.08	Calcium Chloride	Ton			3	3
639.08	Field Office, Type A	Each	0.3	0.7		1
639.11	Testing Facilities, Soils	L.S.			1	1
639.12	Testing Facilities, Bit. Mixes	L.S.			1	1
657.201	Seed and Application, Method A	Unit			10	10
659.10	Mobilization	L.S.	0.3	0.7		1
660.21	On-the-job Training	M.Hr.	600	1400		2000
816.13	8" Cast Iron Gravity Sewer Pipe	L.S.	1			1
817.21	4" Cast Iron Pressure Sewer Pipe	L.S.		1		1
817.211	4" Temporary Pressure Sewer Pipe	L.S.		1		1

ESTIMATED QUANTITIES OF LUMP SUM ITEMS

ITEM NO.	DESCRIPTION	UNIT	No. Channel QUANTITY	So. Channel QUANTITY	Appoaches QUANTITY	TOTAL QUANTITY
502.2601	Structural Concrete, Roadway & Sidewalk Slabs on Steel Bridges	C.Y.	280			280
502.2602	Structural Concrete, Roadway & Sidewalk Slabs on Steel Bridges	C.Y.		405		405
502.2901	Structural Concrete, Wearing Surface on Bridges	C.Y.	56			56
502.2902	Structural Concrete, Wearing Surface on Bridges	C.Y.		90		90
504.7101	Structural Steel, Erection	Lb.	298,000			298,000
504.7102	Structural Steel, Erection	Lb.		358,000		358,000
505.0801	Shear Connectors	Lb.	1152			1152
505.0802	Shear Connectors	Lb.		2660		2660

PROJECT DESIGN ENGINEER — PLANS

	BY	DATE
DESIGN-DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

JANUARY 1969

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
AND
SOUTH CHANNEL BRIDGE
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

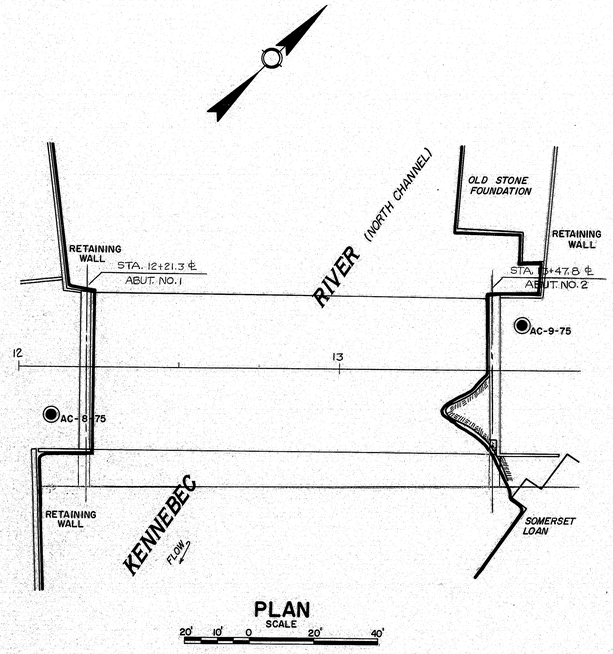
ESTIMATED QUANTITIES

SHEET OF AUGUSTA, MAINE

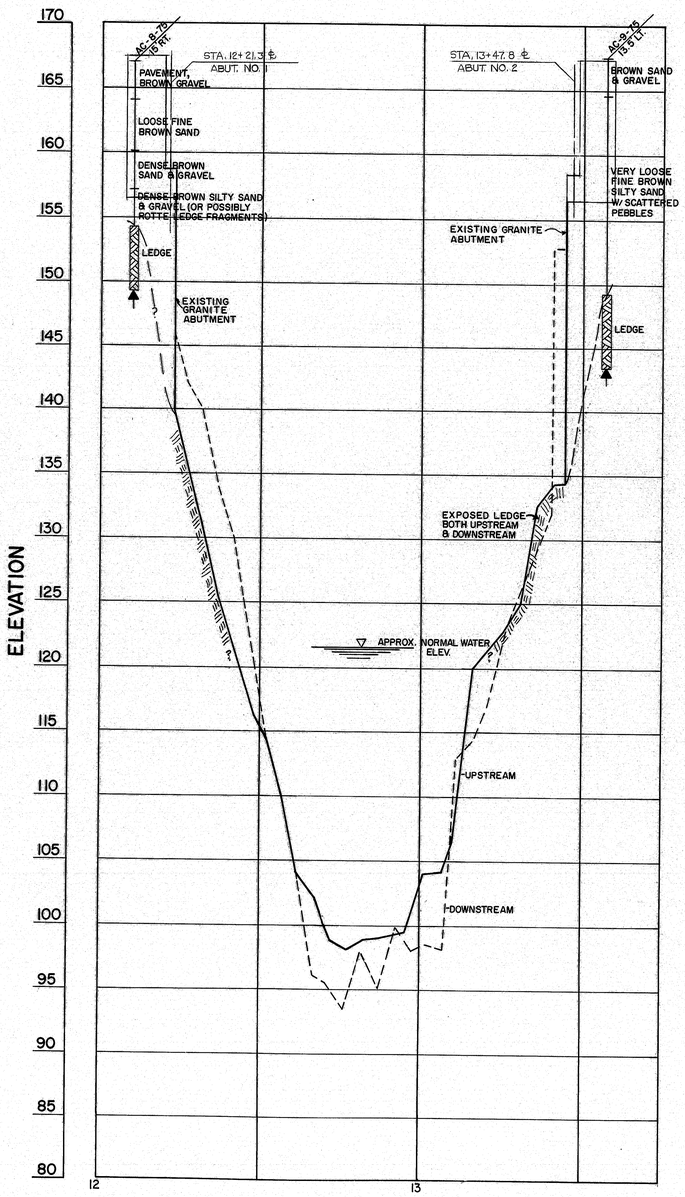
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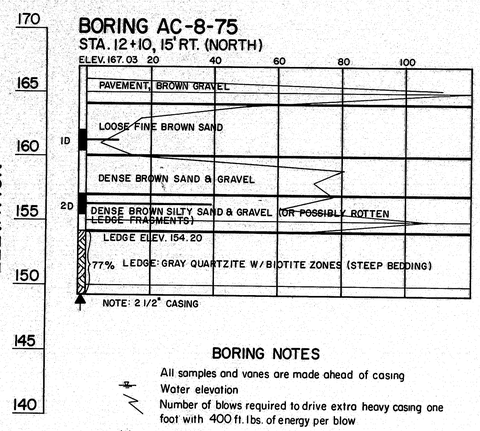
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1	MAINE	BRF-U-025-2(23)	4	71

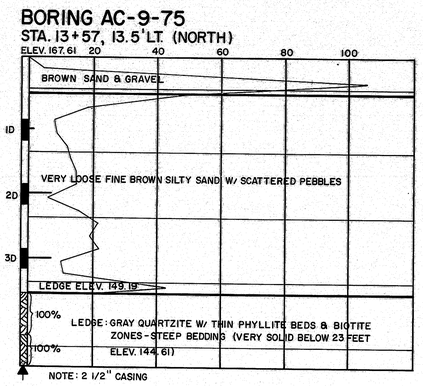


PLAN
SCALE 20' 10' 0 20' 40'



PROFILE NORTH CHANNEL
SCALE
HORIZ. 20' 10' 0 20' 40'
VERT. 5' 0 5' 10'





BORING NOTES

- All samples and vanes are made ahead of casing
- Water elevation
- Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow
- Location of sample or sample attempt
- Number and type of dry sample
- ID — S & H Sampler # 1290's
- Number of blows required to drive spoon or tubing one foot with 350 ft. lbs. of energy per blow
- Bottom of boring (may not be bottom of soil strata)
- 77% — Locations cored by diamond bit and per cent recovery of rock.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

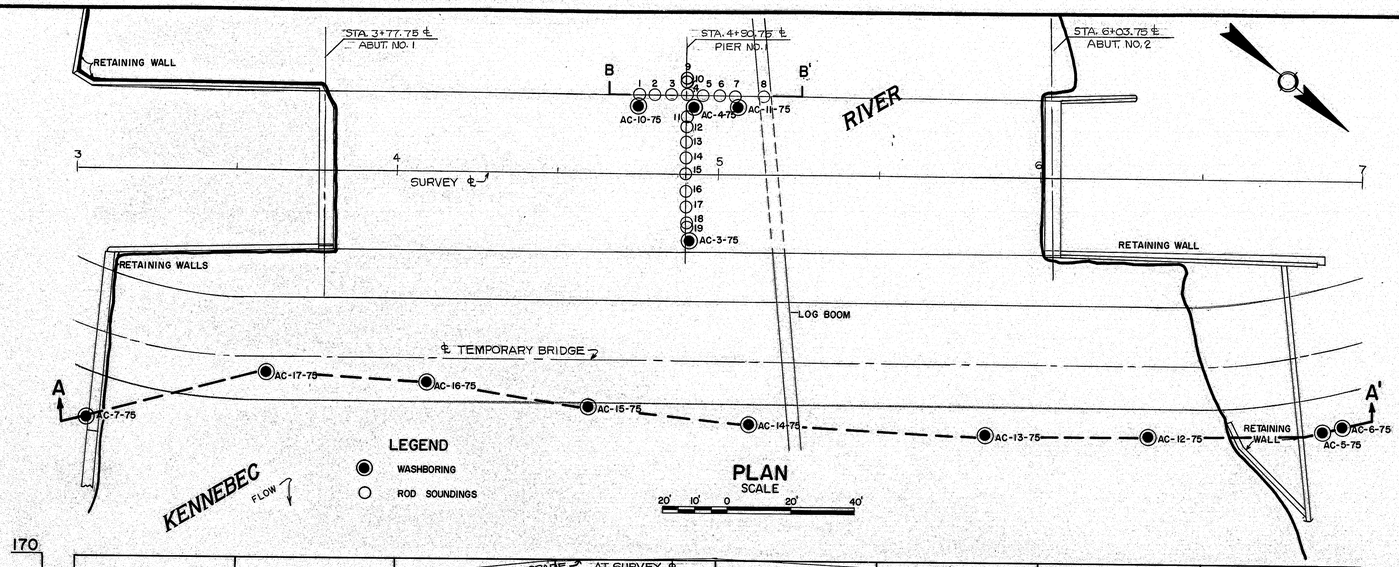
NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY
FOUNDATION SURVEY

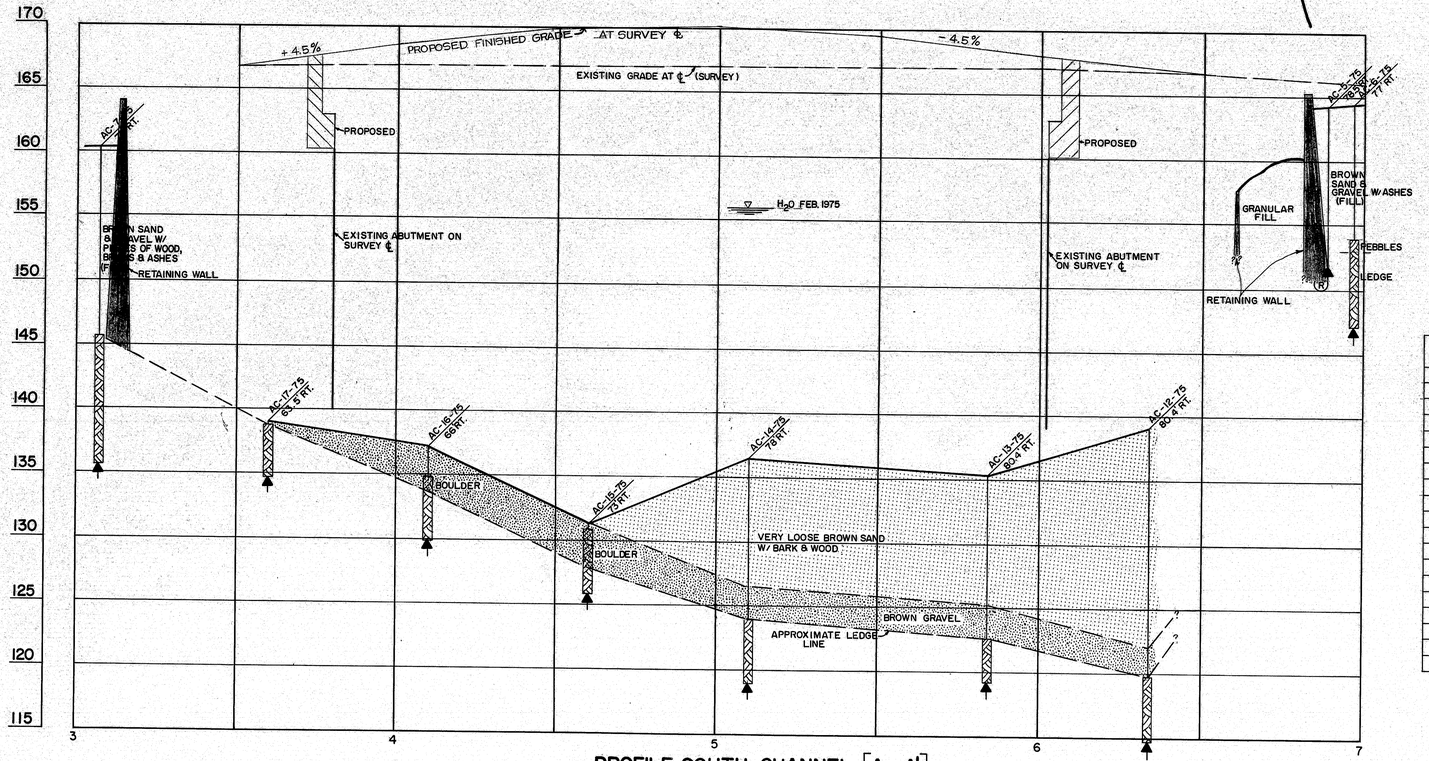
SHEET OF AUGUSTA, MAINE

167-125

BRS-1 2000

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-125-2(23)	5	71



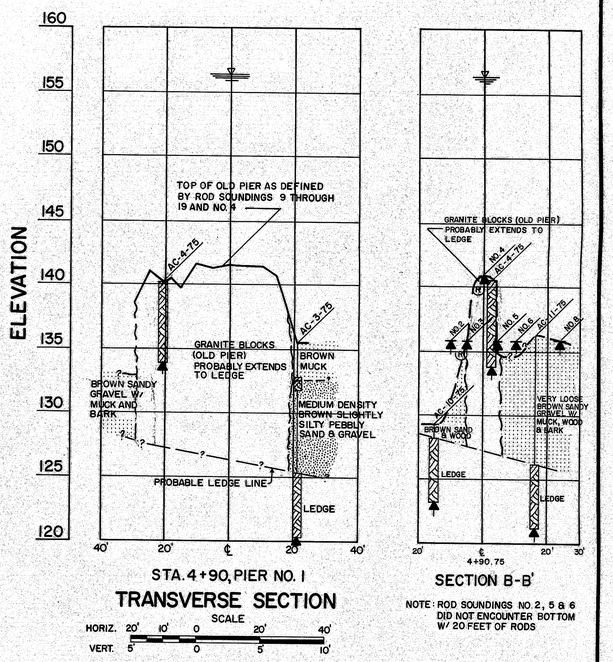


PROFILE SOUTH CHANNEL [A-A']

SCALE

HORIZ. 20' 10' 0 20' 40'

VERT. 5' 0 5' 10'



STA. 4+90, PIER NO. 1

TRANSVERSE SECTION

SCALE

HORIZ. 20' 10' 0 20' 40'

VERT. 5' 0 5' 10'

SECTION B-B'

NOTE: ROD SOUNDINGS NO. 2, 5 & 6 DID NOT ENCOUNTER BOTTOM W/ 20 FEET OF RODS

ROD SOUNDING NO.	STATION & OFFSET	REFUSAL ELEVATIONS
1.	4+75, 25' LT.	N
2.	4+80, 25' LT.	N
3.	4+85, 25' LT.	135.86
4.	4+90, 25' LT.	140.96
5.	4+95, 25' LT.	N
6.	5+00, 25' LT.	N
7.	5+05, 25' LT.	N
8.	5+14, 25' LT.	HIT RIVER BOTTOM AT ELEV. 135.86 (NO REFUSAL)
9.	4+90, 30' LT.	N
10.	4+90, 29' LT.	137.86
11.	4+90, 18' LT.	140.36
12.	4+90, 15' LT.	139.86
13.	4+90, 10' LT.	141.66
14.	4+90, 5' LT.	141.26
15.	4+90, ℄	141.56
16.	4+90, 5' RT.	141.46
17.	4+90, 10' RT.	141.46
18.	4+90, 15' RT.	140.66
19.	4+90, 16' RT.	N

N- NO BOTTOM WITH 20' OF RODS (ELEV. 135.86)

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN - DETAILED	
	CHECKED	
	REVISIONS	
	FIELD CHANGES	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE

OVER THE

KENNEBEC RIVER

IN THE TOWN OF

SKOWHEGAN

SOMERSET COUNTY

FOUNDATION SURVEY

SHEET OF AUGUSTA, MAINE

JANUARY 1980

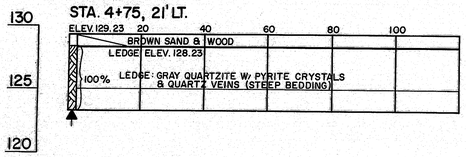
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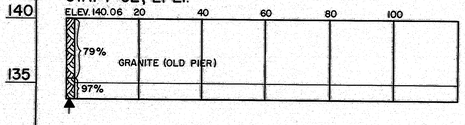
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-0-025-2(23)	6	71

PIER NO. 1

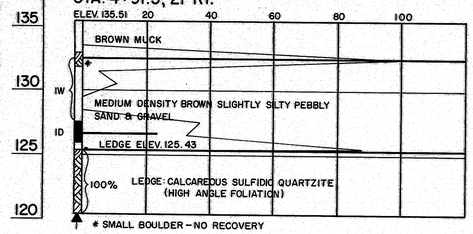
BORING AC-10-75
STA. 4+75, 21' LT.



BORING AC-4-75
STA. 4+92, 21' LT.

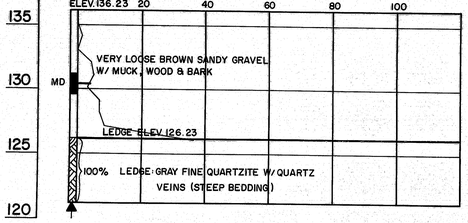


BORING AC-3-75
STA. 4+91.5, 21' RT.



SMALL BOULDER – NO RECOVERY

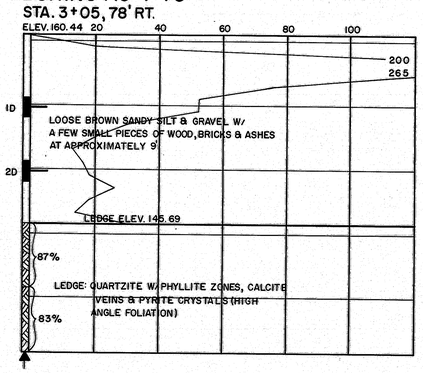
BORING AC-11-75
STA. 5+06, 21' LT.



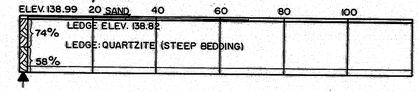
ELEVATIONS

TEMPORARY BRIDGE BORINGS

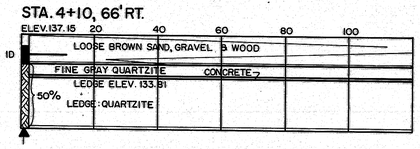
BORING AC-7-75
STA. 3+05, 78' RT.



BORING AC-17-75
STA. 3+60, 63.5' RT.



BORING AC-16-75
STA. 4+10, 66' RT.



BORING NOTES

All samples and vanes are made ahead of casing

Water elevation

Number of blows required to drive extra heavy casing one foot with 400 ft. lbs. of energy per blow

Location of sample or sample attempt

Number and type of dry sample
ID — S & H Sampler # 1290's

IW — Wash sample and number

MD — Unsuccessful sample attempt and type of sampler

Number of blows required to drive spoon or tubing one foot with 350 ft. lbs. of energy per blow

H — Sampling spoon or seamless tubing driven by static weight of drill rods and hammer

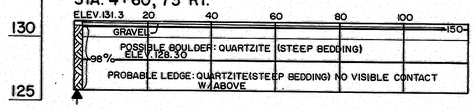
Bottom of boring (may not be bottom of soil strata)

(R) Refusal of drill rods or casing (may not be ledge)

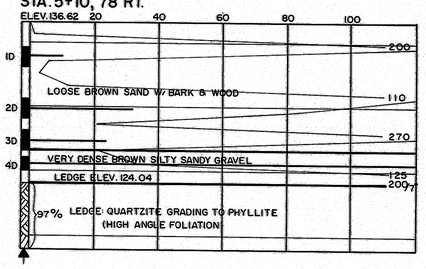
77% Locations cored by diamond bit and per cent recovery of rock

Note: Washborings were made with 2 1/2" casing

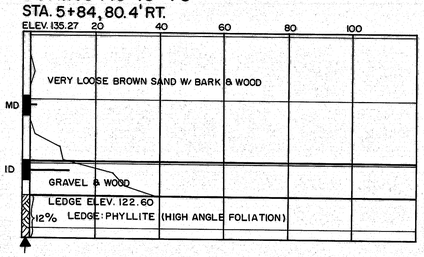
BORING AC-15-75
STA. 4+60, 73' RT.



BORING AC-14-75
STA. 5+10, 78' RT.

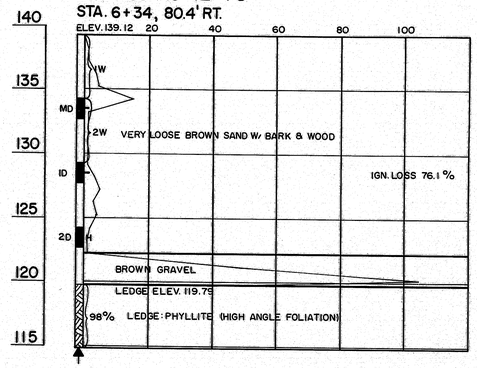


BORING AC-13-75
STA. 5+84, 80.4' RT.

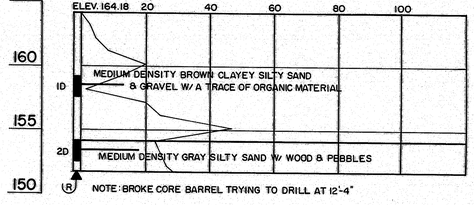


ELEVATIONS

BORING AC-12-75
STA. 6+34, 80.4' RT.

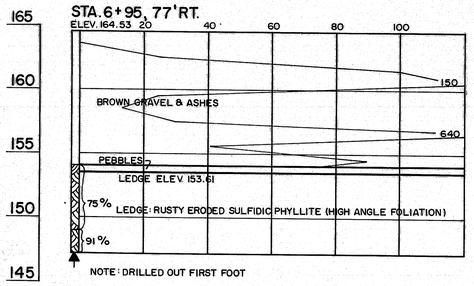


BORING AC-5-75
STA. 6+89, 78.5' RT.



NOTE: BROKE CORE BARREL TRYING TO DRILL AT 12'-4"

BORING AC-6-75
STA. 6+95, 77' RT.



NOTE: DRILLED OUT FIRST FOOT

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED		
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

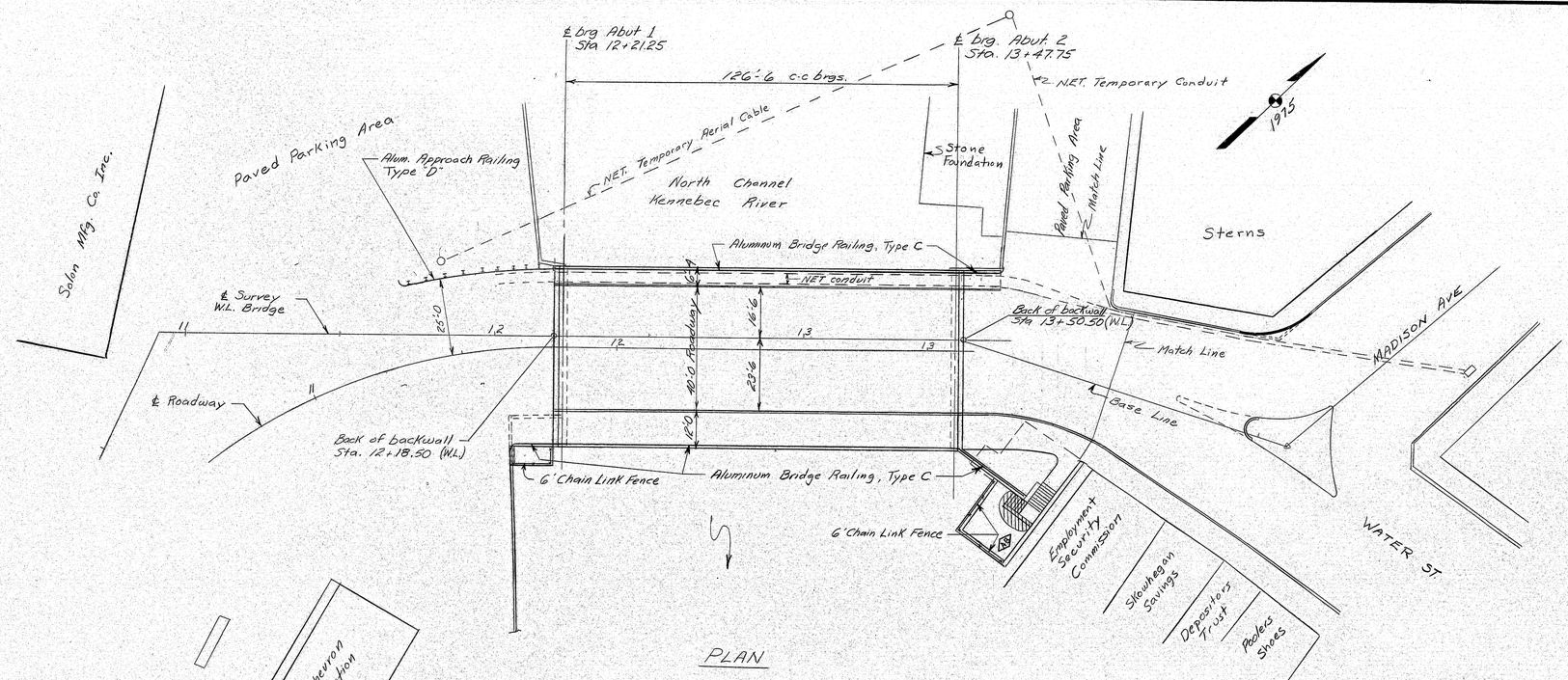
BORING DETAILS

SHEET OF AUGUSTA, MAINE

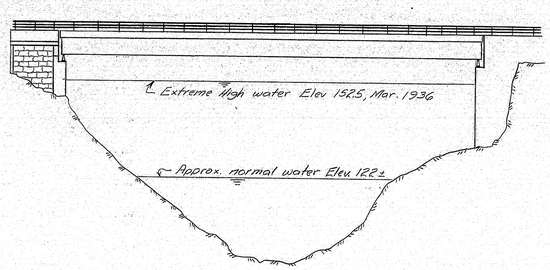
JANUARY 1989

167-127

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	7	71



PLAN



ELEVATION
(Bridge profile - level)

CONSTRUCTION NOTES

1. All utility plant shall be adjusted by the respective utilities unless otherwise noted.
2. Refer to the Right of Way Map for construction limits and Right of Way information.
3. Removal of existing masonry abutments and retaining walls will be paid for at the contract unit price for Structural Excavation Abutments and Retaining Walls.
4. Removal of existing railings on approach retaining walls will be considered incidental to contract items and become the property of the Contractor.
5. All work incidental to maintenance of vehicular and pedestrian traffic will be paid under Special Detour, 22± foot Roadway Width, Vehicular and Pedestrian Traffic Separated, Item 510.1201. See Special Provisions.
6. Removal of existing superstructure will be paid under Removal of Existing Superstructure (Property of Contractor), Item 202.10.
7. Sidewalk concrete on approaches, slab concrete at Abutment 1 extension and concrete in Scenic Overlook will be paid under Structural Concrete, Abutments and Retaining Walls, Item 502.21
8. All utility openings in the abutments shall be sealed in a manner approved by the Engineer.
9. Remove 14'± of beam type guard rail at downstream approach to Abutment 1 as directed by the Engineer. This work shall be considered incidental to contract items.

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PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	JET	11/75
CHECKED	RAYF	11/75
REVISIONS		
FIELD CHANGES		

PLANS

JANUARY 1968

As Built 7-5-77 DAG

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

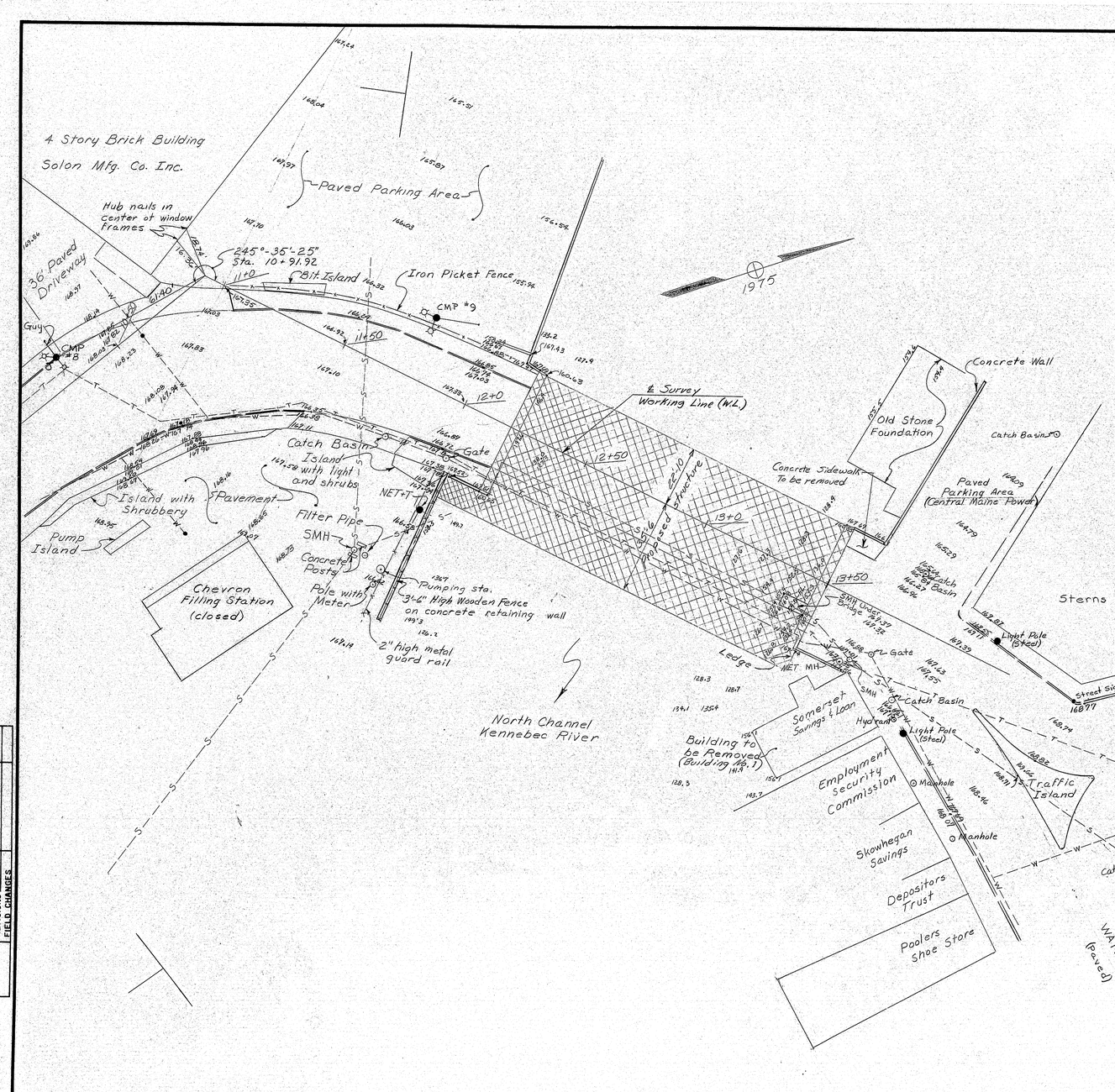
GENERAL PLAN

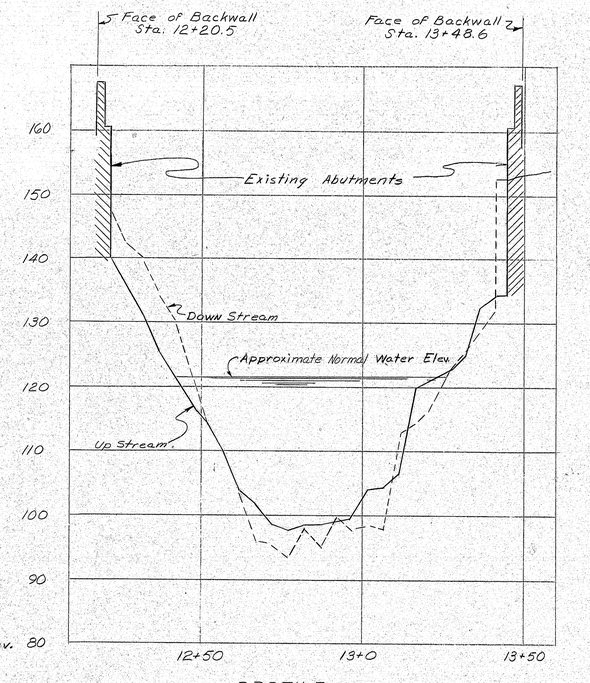
SHEET OF AUGUSTA, MAINE

203-1 3966

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F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(63)	8	71





PROFILE
(North Channel)

Legend
Water Main ———W———
Telephone cables (underground) ———T———
Sewer Main ———S———

Survey Plotted DMD 3/6/75

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
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NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

SURVEY

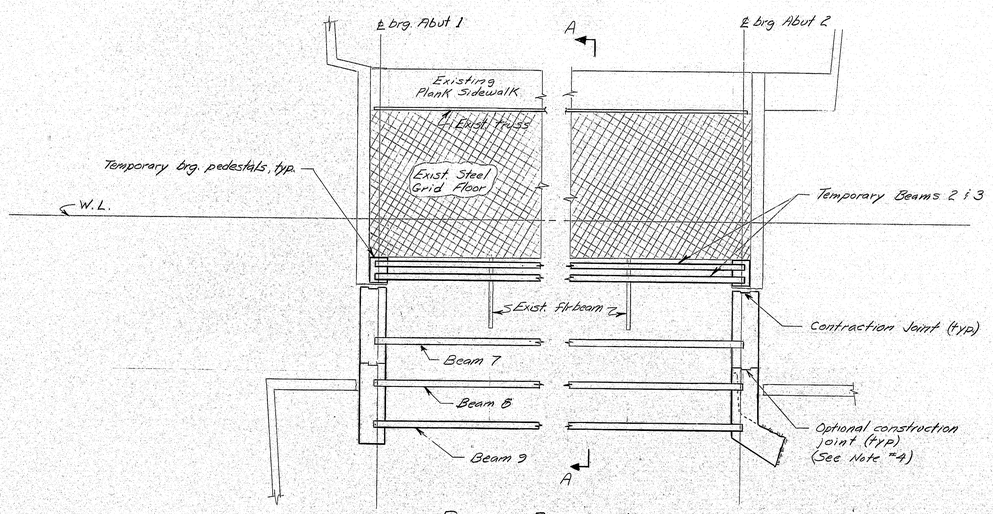
SHEET OF AUGUSTA, MAINE

JANUARY 1968

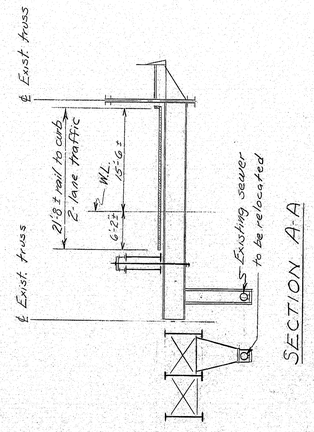
252-1 2500

167-129

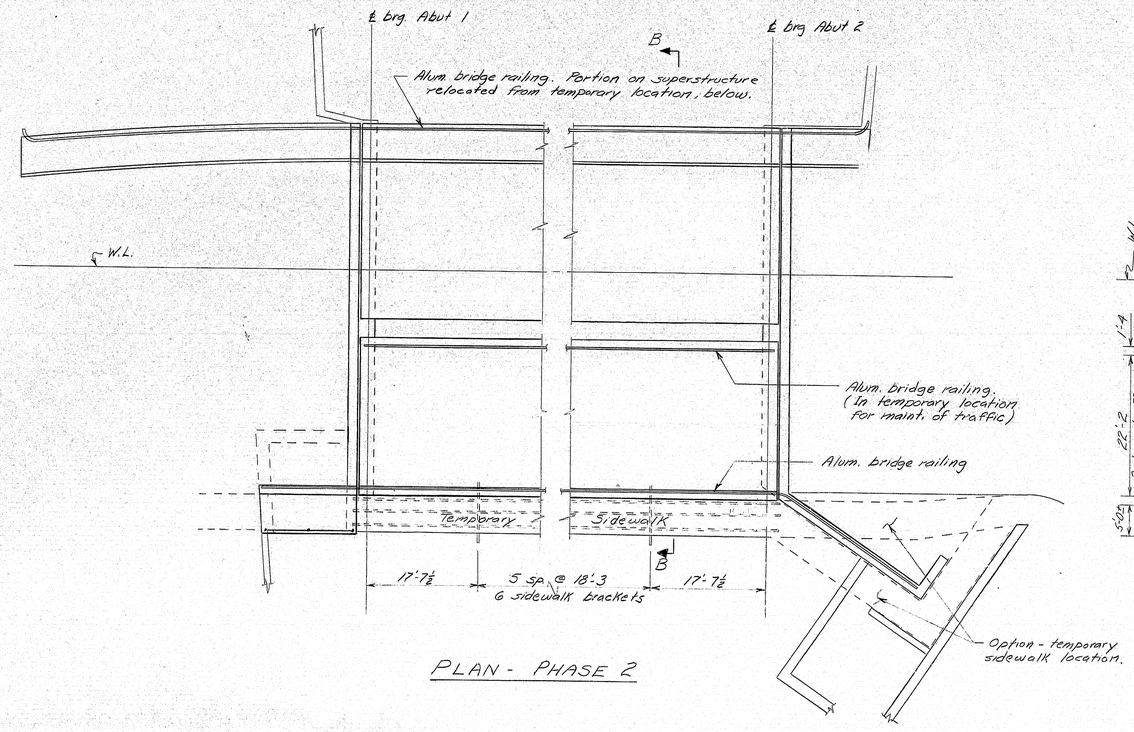
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1	MAINE	BRF-U-025-2(23)	9	71



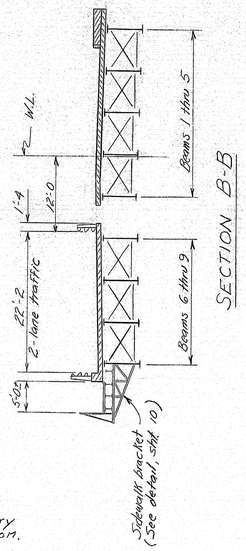
PLAN - PHASE 1



SECTION A-A



PLAN - PHASE 2



SECTION B-B

NOTES - SPECIAL DETOURS

1. Two lanes of traffic shall be maintained at all times
2. Construction shall conform to the following sequence, in order to maintain traffic at all times. This sequence is an outline only and is not all inclusive. This sequence shall not be altered without prior approval of the Engineer.

Phase 1

a) Establish required approach work for Phase 1 (U.S.) traffic.
b) Construct temporary bearing pedestals.
c) Remove D.S. grid floor and erect Temporary Beams 2 & 3.
d) Remove existing D.S. sidewalk, D.S. truss, and portions of existing D.S. abutments.
e) Construct D.S. breastwalls for beams 6, 7, 8 & 9.
f) Erect beams 7, 8, & 9, (including diaphragms and crossframes) and relocate existing sewer. (See sheet 25.
g) Sever existing floorbeams and remove remaining D.S. superstructure.
h) Erect beam 6.
i) Construct D.S. superstructure and abutment backwalls for Phase 2 traffic.
j) Erect bridge railings and temporary sidewalk.

Phase 2

l) Establish required approach work for Phase 2 traffic.
m) Remove existing U.S. superstructure, Beams 2 & 3, and U.S. portions of existing abutments.
n) Construct U.S. abutments and superstructure
o) Place center strip of slab.
p) Place U.S. wearing surface
q) Remove bridge railing from temporary location location and install U.S. bridge railing.
r) Remove temporary guard rail and re-direct two lane traffic to U.S. portion providing a minimum of 24' roadway (not shown).
s) Remove temporary sidewalk
t) Construct D.S. sidewalk and place D.S. wearing surface.

3. See Special Provisions, Section 510, Special Detour, 22± foot Roadway Width, Vehicular & Pedestrian Traffic Separated.
4. As an alternate to the construction sequence in Phase 1, the existing downstream sidewalk may be removed before erection of temporary beams 2 and 3 allowing for the substructure construction for beams 8 and 9. The construction of the substructure for Beams 6 and 7 require truss removal.

See sheet 10 for Temporary Bearing Pedestal
See sheet 10 for Temporary Sidewalk
See sheet 18 for Temporary Floorbeam Support
See sheet 20 for temporary railing location

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	JET	11/75
CHECKED	JET	11/75
REVISIONS	KYF	
FIELD CHANGES		

PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
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IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

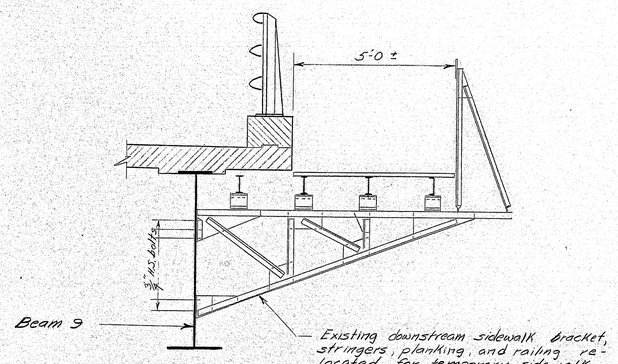
SPECIAL DETOURS

SHEET OF AUGUSTA, MAINE

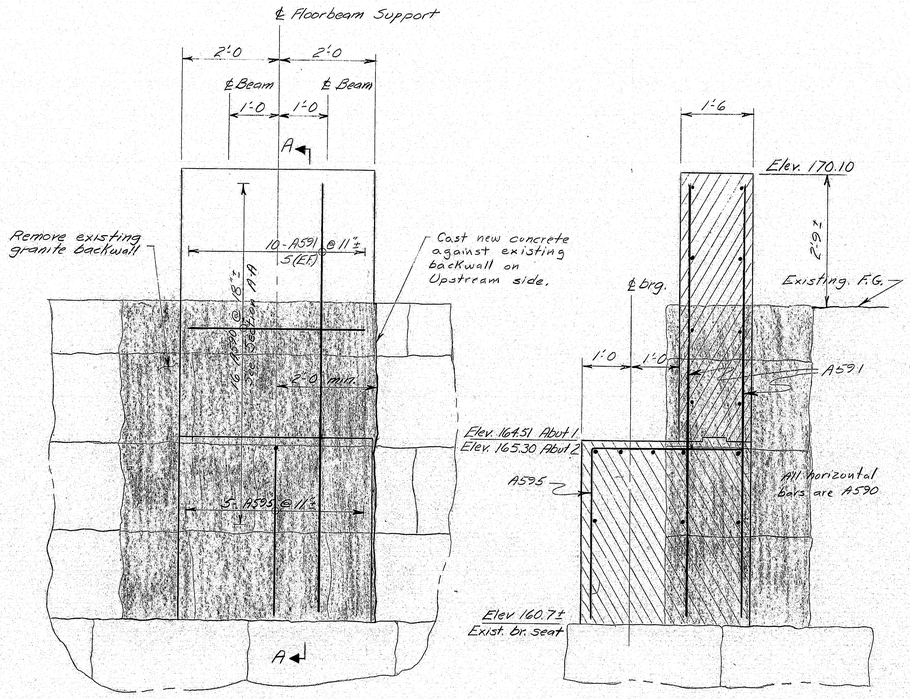
JANUARY 1968

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F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	10	71



SIDEWALK BRACKET DETAIL



ELEVATION

SECTION A-A

TEMPORARY PEDESTAL

Abutment 1 shown
Abutment 2 opposite hand

NOTES - TEMPORARY SIDEWALK

1. All work done on the temporary sidewalk shall comply with Section 510 - Special Detours. Payment will be made under Pay Item 510.1201.
2. The existing downstream sidewalk brackets and stringers may be used in the temporary sidewalk. The cantilevered portion of Abutment #1 may serve as support for the stringers. The Contractor must provide for stringer support at Abutment #2. The existing brackets and stringers will be considered structurally adequate.
3. There shall be no steps in the temporary sidewalk.

NOTES - TEMPORARY PEDESTAL

1. The temporary concrete pedestals shall be in place a minimum of five days prior to erection of steel.
2. Concrete for temporary concrete pedestals and the removal of temporary pedestals will be included for payment under Item 510.1201. Reinforcing steel fabricated & delivered and placed will be paid for under Items 503.12 and 503.13 respectively.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	JET	JET	11/75
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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
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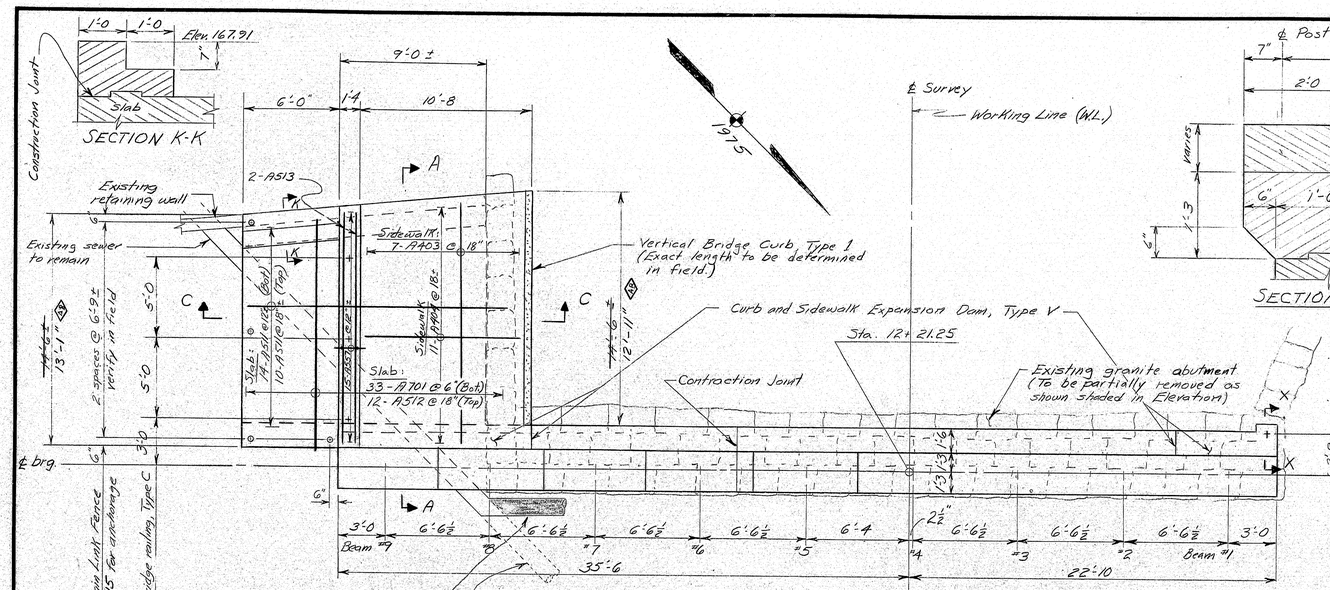
SPECIAL DETOURS DETAILS

SHEET OF AUGUSTA, MAINE

283-1 2000

167-131

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	11	71



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DESIGN - DETAILED	JET	11/75
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PLANS

JANUARY 1966

As Built 7-5-77 DAE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
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SOMERSET COUNTY

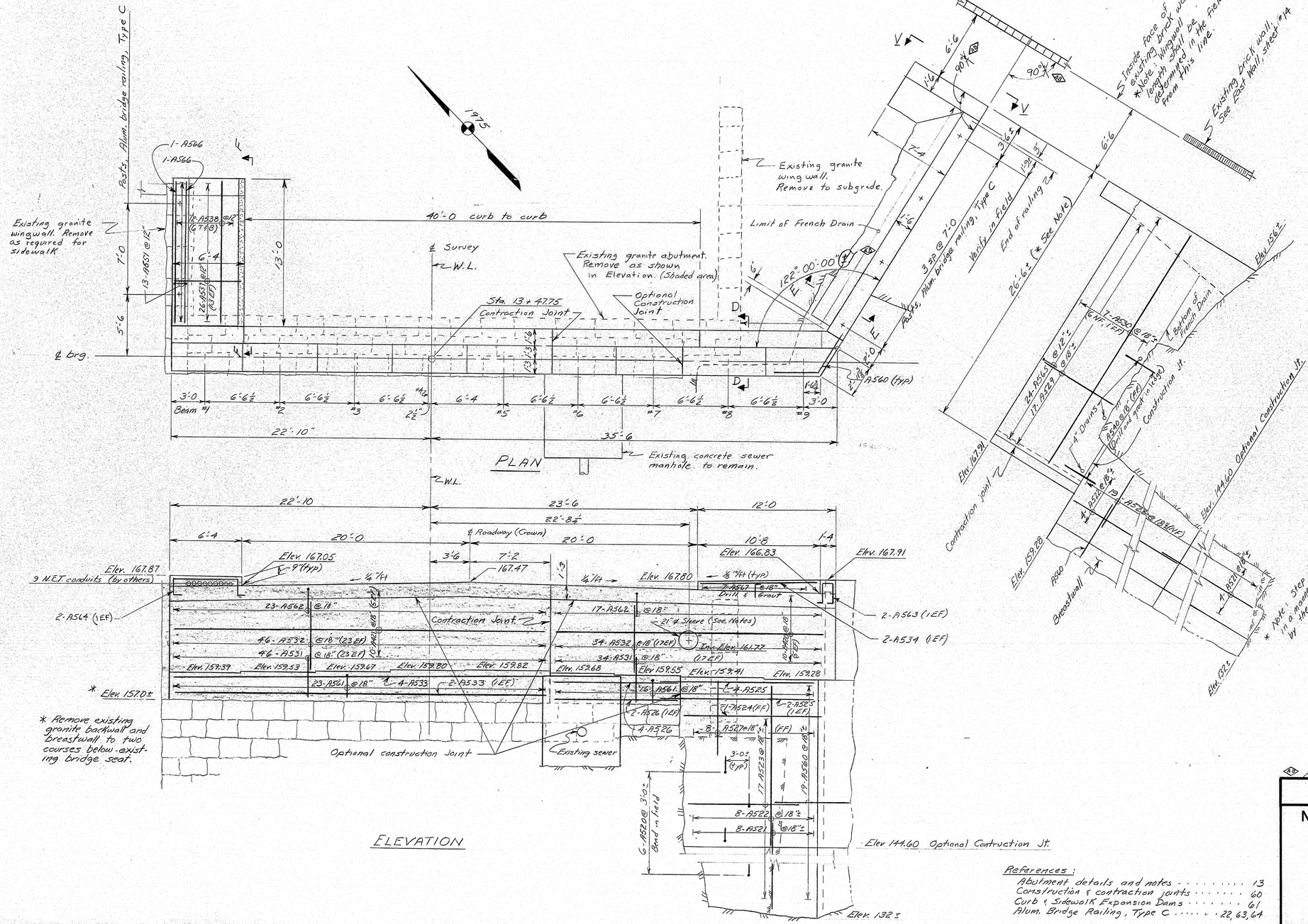
ABUTMENT NO. 1

SHEET OF AUGUSTA, MAINE

167-132

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F.A.N.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	12	71



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PLANS	DESIGN - DETAILED	JET	11/75
	CHECKED	JET	11/75
	REVISIONS	MVF	
	FIELD CHANGES		

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References :

Abutment details and notes 13
Construction & contraction joints 60
Curb & Sidewalk Expansion Dams 61
Alum. Bridge Railing, Type C 22, 63, 64

STATE OF MAINE
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NORTH CHANNEL BRIDGE
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ABUTMENT NO.2

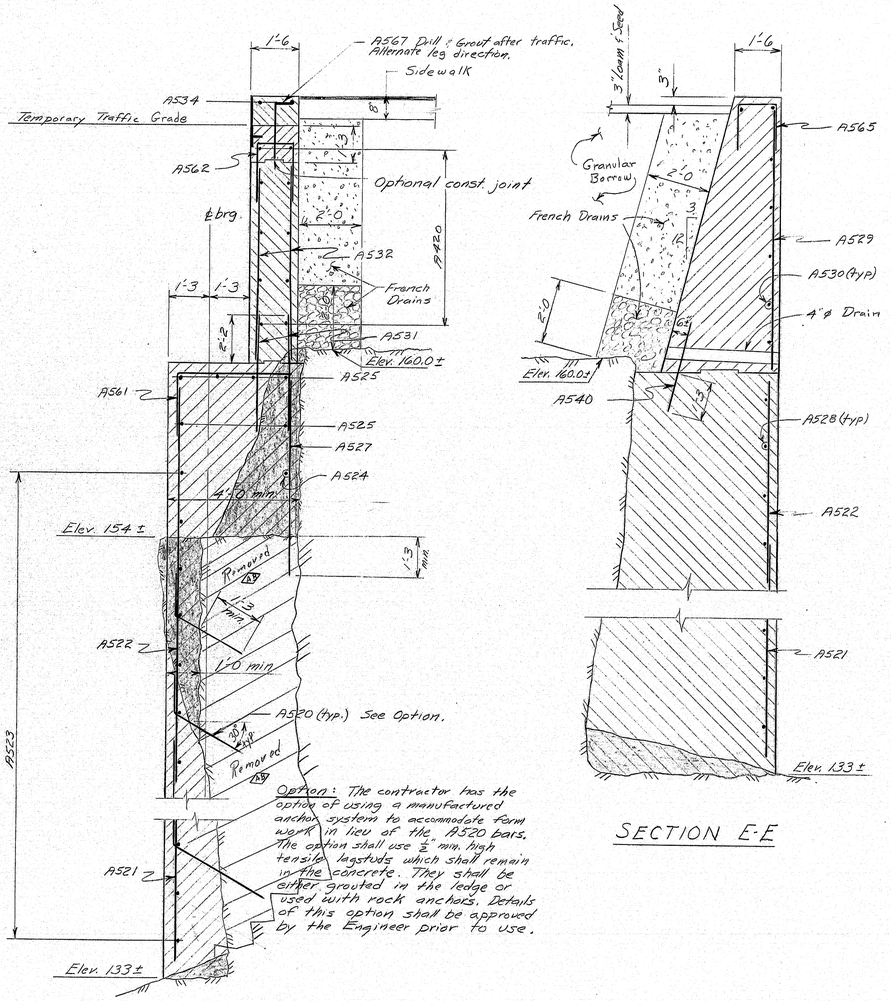
SHEET OF AUGUSTA, MAINE

△1 As Built 7-5-77

167-133

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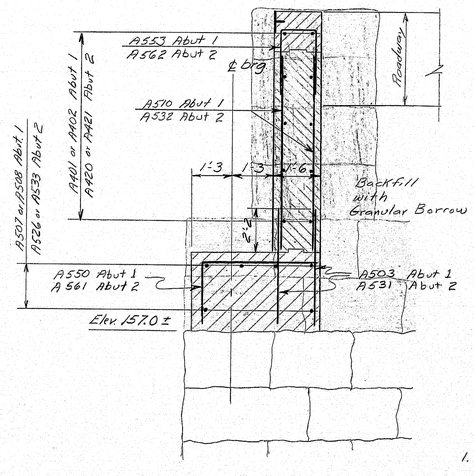
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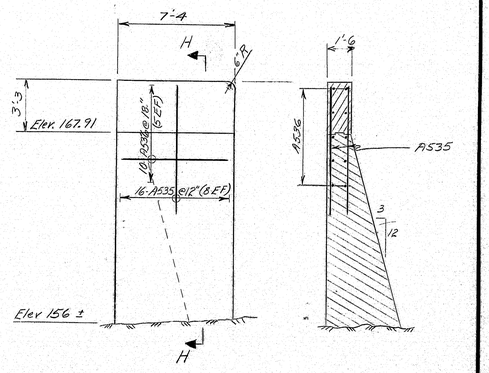
SECTION D-D

Option: The contractor has the option of using a manufactured anchor system to accommodate form work in lieu of the A520 bars. The option shall use ¾" min. high tensile lagstuds which shall remain in the concrete. They shall be either grouted in the ledge or used with rock anchors. Details of this option shall be approved by the Engineer prior to use.

SECTION E-E



TYPICAL ABUTMENT SECTION @ EXISTING ABUTMENTS



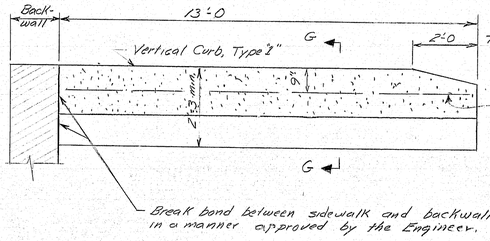
VIEW V-V SECTION H-H

ABUTMENT NOTES

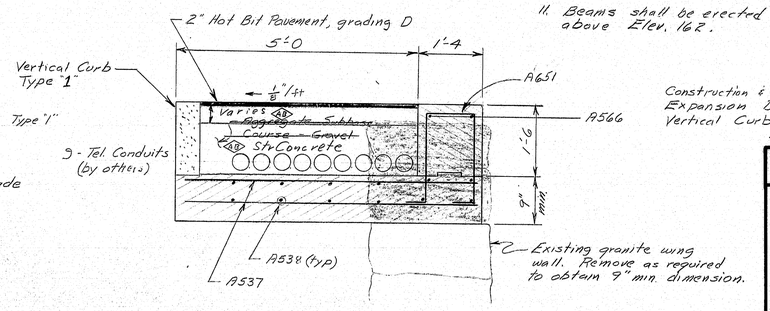
1. Chamfer all exposed edges of concrete ½" inch unless otherwise noted.
2. Reinforcing steel shall have 2 inches cover unless otherwise indicated.
3. Place reinforcing steel in bridge seats to clear anchor bolts.
4. Break bond at vertical contraction joints by a method approved by the Engineer. Place polyvinylchloride waterstops in all vertical contraction joints. Waterstops are not required in horizontal construction joints.
5. Exact location of 4"ø drains in Abutment 2 to be determined by the Engineer in the field.
6. Top of backwalls shall have a Wearing Surface Finish.
7. Protective Coating for Concrete Surfaces shall be applied to the finished backwalls & sidewalks and as otherwise shown.
8. Reinforcing steel splices shall be a minimum of 20 inches for #5 bars unless otherwise shown.
9. Exact locations of 4"ø drains will be determined by the Engineer in the field.
10. Welding of reinforcing steel will be allowed in the top 2 feet of the abutment backwall.
11. Beams shall be erected prior to backfilling of abutments above Elev. 162.

ABUTMENT NOTES (CONT.)

12. The 21"ø sleeve in abutment backwalls will be supplied by Skowhegan Water Company, and shall be installed by the Contractor. Installation will be considered incidental to Item 502.21.
13. Grout for reinforcing steel and anchor bolts shall contain an approved non-shrink additive.
14. Polyethelene sheets or an approved impervious coating shall be placed on and around the abutment bearing areas prior to setting the bearing pedestals and shall extend underneath the masonry plates. The abutment breastwalls shall be protected from rust staining by leaving forms in place temporarily or by covering with same materials after removal of forms. The protection materials shall remain in place at least until the completion of the placement of the Structural Concrete Slab. Removal of the stains will not be required unless, in the opinion of the Engineer, the Contractor has not made satisfactory effort to prevent staining.



VIEW F-F



SECTION G-G

REFERENCES

Construction & Contraction Joints 60
Expansion Dams 61
Vertical Curb 68

AB As Built 7-5-77 DAB

PROJECT DESIGN ENGINEER	BY	DATE
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PLANS

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
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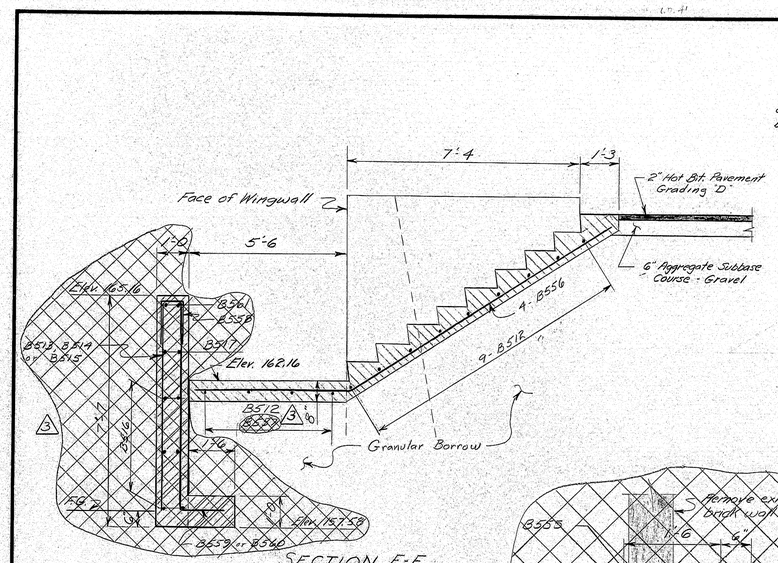
ABUTMENT DETAILS

SHEET OF AUGUSTA, MAINE

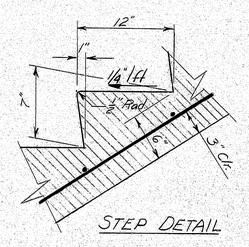
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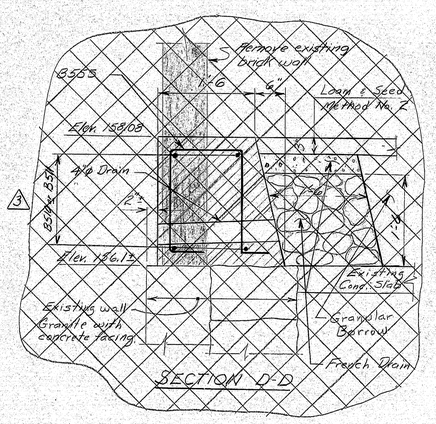
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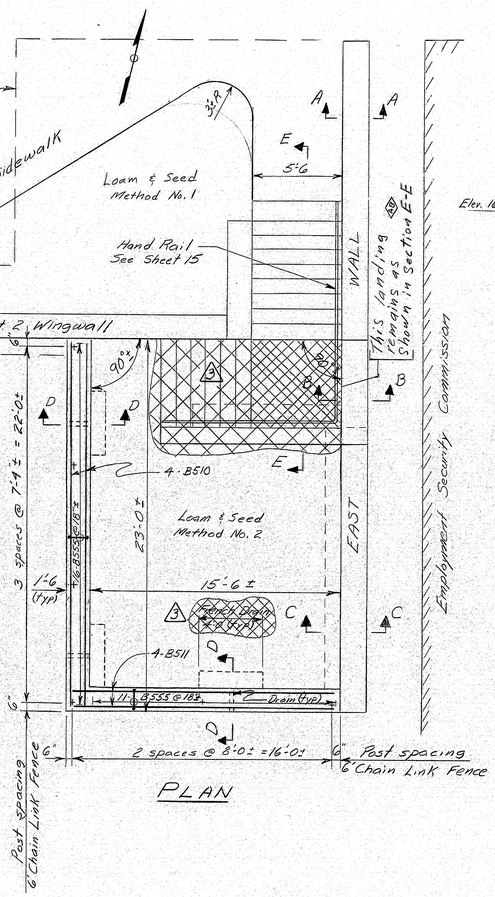
SECTION E-E



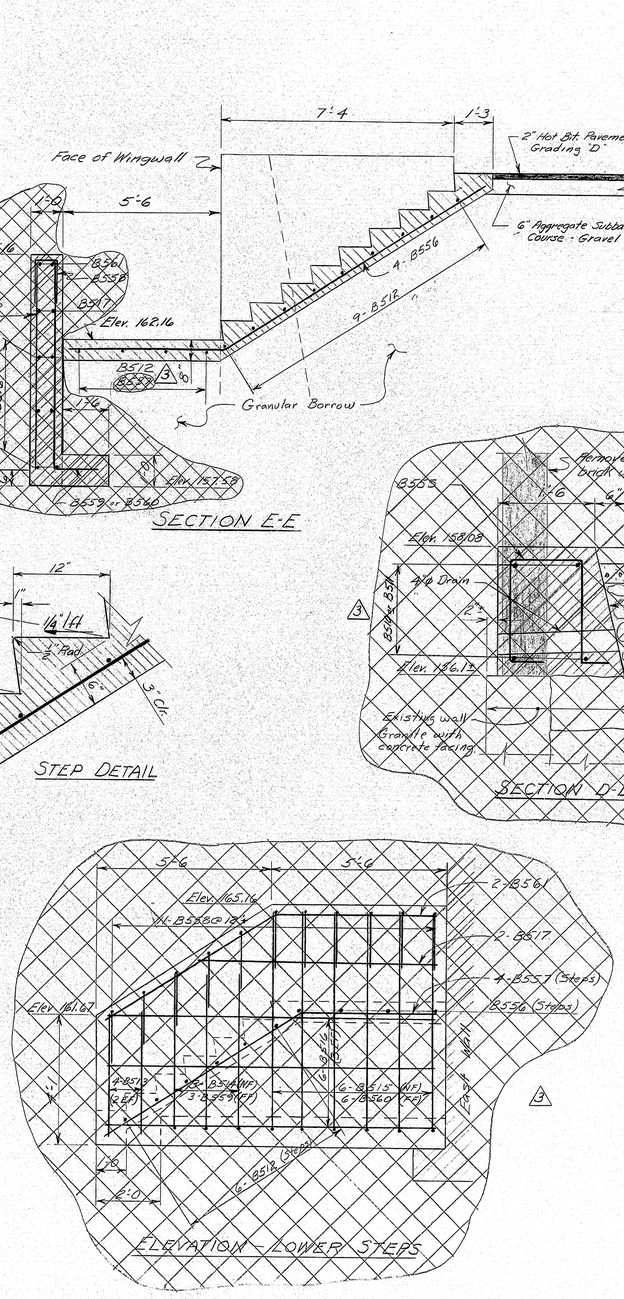
STEP DETAIL



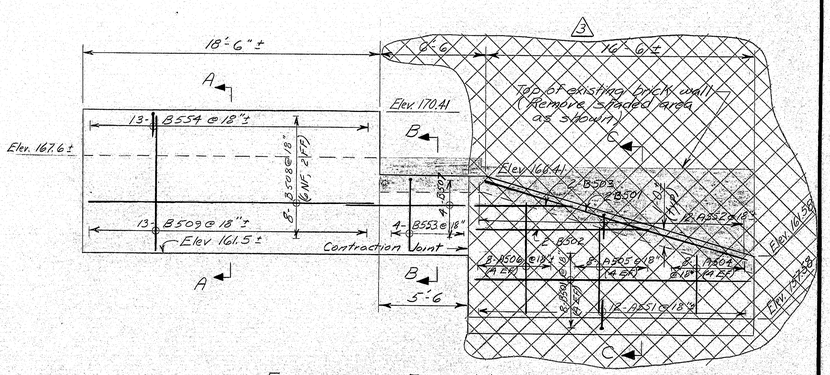
SECTION D-D



PLAN

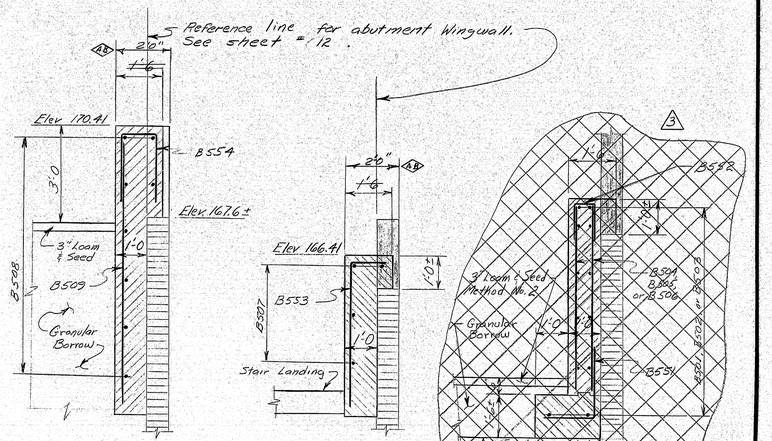


ELEVATION - LOWER STEPS



ELEVATION - EAST WALL

Looking from Inside



SECTION A-A

SECTION B-B

SECTION C-C

NOTES - SCENIC OVERLOOK

1. Reinforcing steel shall be cut to fit dimensions if necessary. Such cutting shall be considered as incidental to Item 503.13.
2. Break bond between steps and adjacent concrete surfaces by a method approved by the Engineer.
3. Concrete steps and landing shall have a light broom finish.

References

Chain Link Fence and Hand Rail . . . . sheet 15
6' Chain Link Fence . . . . . sheet 69

3 Revision made 7-20-76 See sheet 14-A for changes.

A8 As Built 7-5-77 DAC

PROJECT DESIGN ENGINEER	BY	DATE
PLANS DESIGN - DETAILED	JET	11/75
CHECKED	MVE	11/75
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

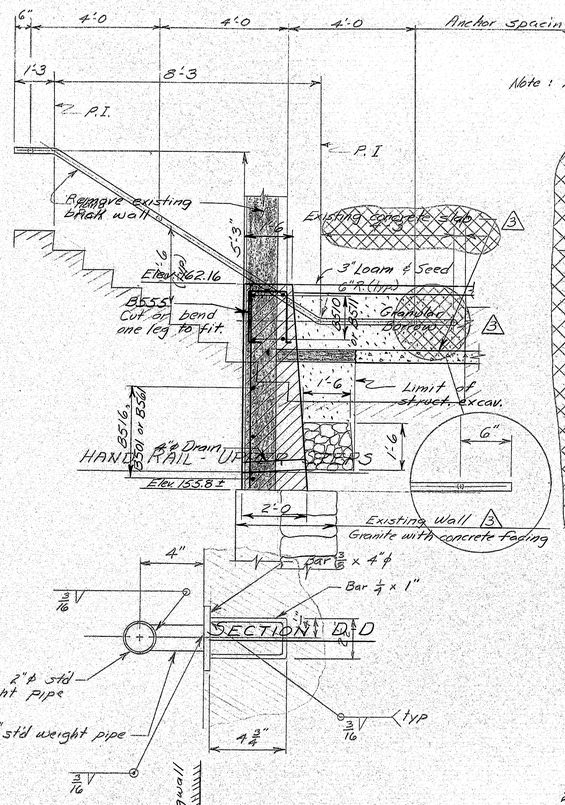
SCENIC OVERLOOK

SHEET OF AUGUSTA, MAINE

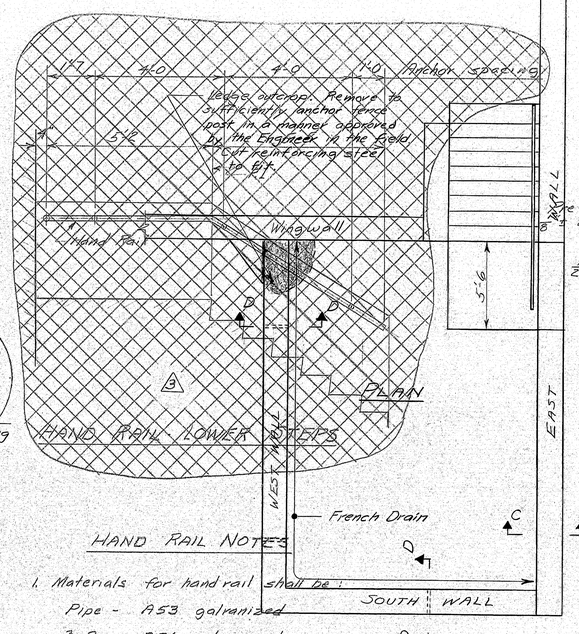
JANUARY 1969

167-135

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-0252(28)	14A	71

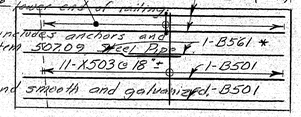


Note : All dimensions (except Radius) are to ℄ Pipe.



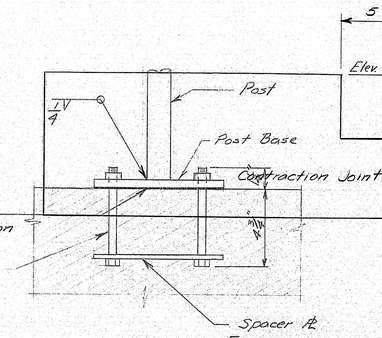
HAND RAIL NOTES

1. Materials for hand rail shall be :
   - Pipe - A53 galvanized
   - 3/8 Bar - A36 galvanized
   - 1/4 Bar - A36
2. Anchors shall be cast in concrete
3. Hand rail shall be continuous. Not more than 20'-0± one splice shall be used.
4. Ends of railings shall be plugged. Anchor B555 @ 18"± Anchor B3, 162.16 bottom of railing at intervals of four feet @ 4'-0± at 1'-6±± from lower end of railing.
5. Payment for hand railing includes anchors and will be paid for under Item 507.09 Steel Pipe Hand Railing.
6. All welds shall be ground smooth and galvanized.

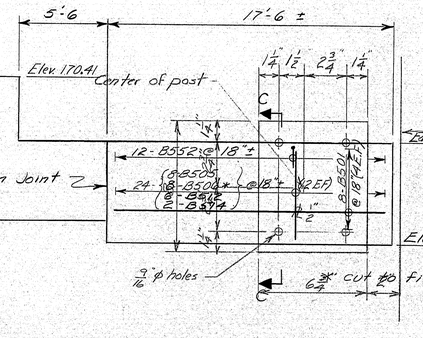


* straighten in field

ELEVATION - SOUTH WALL



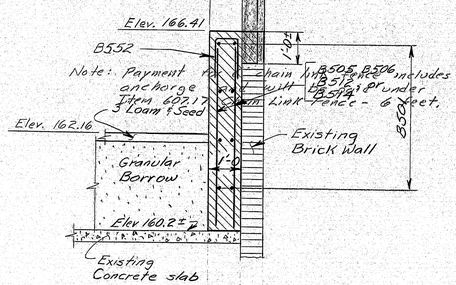
ELEVATION - EAST WALL



POST BASE DETAIL

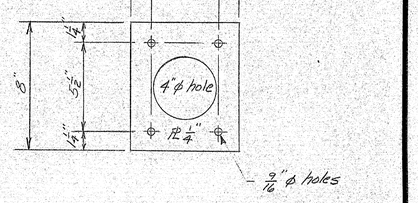
POST ANCHORAGE DETAIL

Anchor bolts shall be ASTM A307 galvanized.
Post base shall be ASTM A36 ~~Hot rolled~~ galvanized.
Spacer plate shall be ASTM A36



SECTION C-C

ANCHORAGE FOR 6' CHAIN LINK FENCE



SPACER PLATE DETAIL

REVISION NOTES

1. This sheet shows the revisions of sheet #14 labeled as 3. See sheet #14 for details

3 Revision made 7-20-76

PROJECT ENGINEER	BY	DATE
DESIGN - DETAILED	JET	11/75
CHECKED	MW/RLL	2/76
REVISIONS		
FIELD CHANGES		

PLANS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

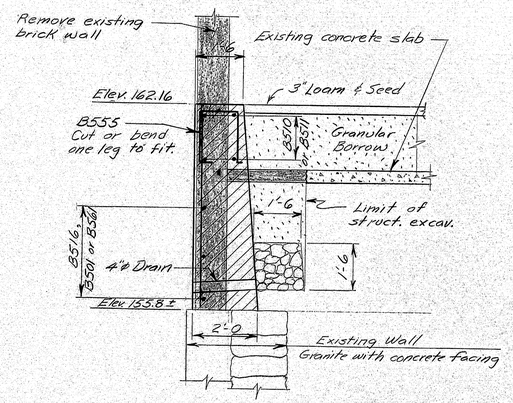
NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

REVISED CONTRACT PLANS

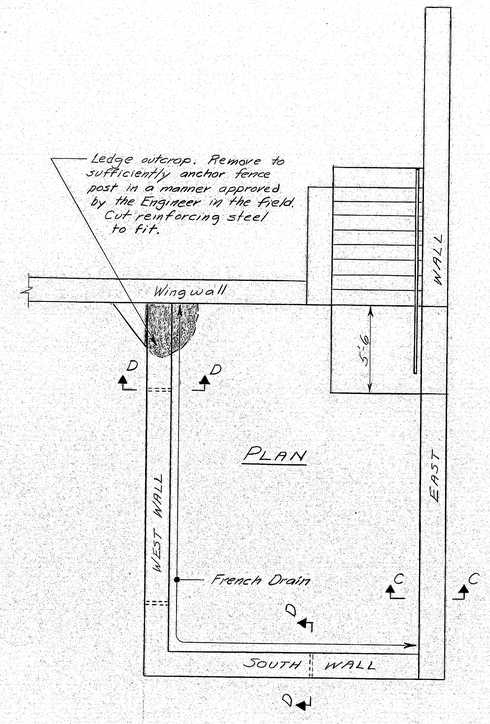
SHEET OF AUGUSTA, MAINE

167-130

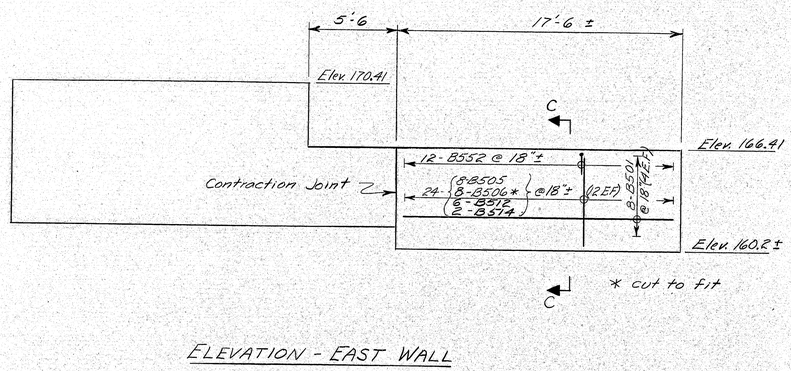
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-085-2(23)	14-A	



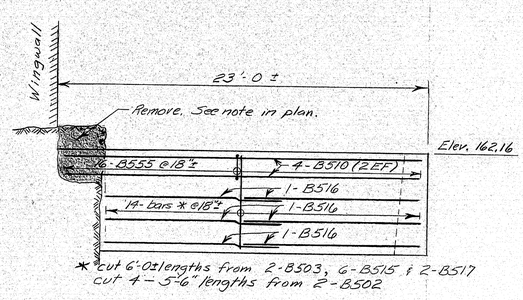
SECTION D-D



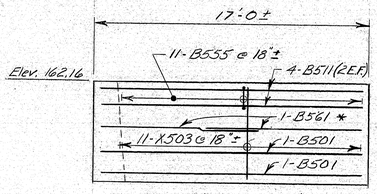
PLAN



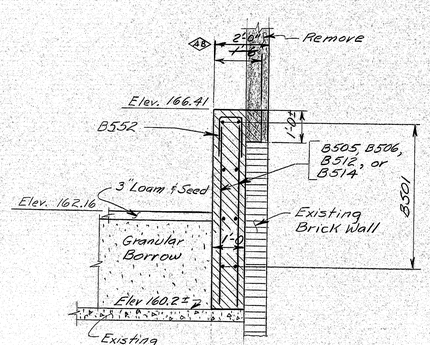
ELEVATION - EAST WALL



ELEVATION - WEST WALL



ELEVATION - SOUTH WALL



SECTION C-C

REVISION NOTES

1. This sheet shows the revisions of sheet #14 labeled as A. See sheet #14 for details not revised.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	JET	7/16
	CHECKED	PJL	7/16
	REVISIONS		
	FIELD CHANGES		

JANUARY 1988

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

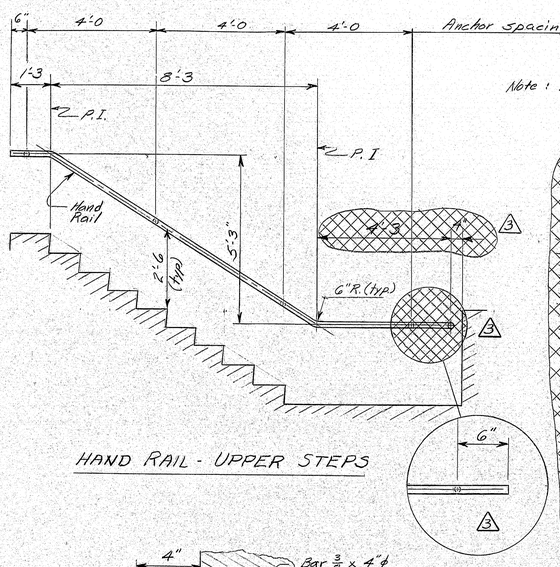
REVISED SCENIC OVERLOOK

SHEET OF AUGUSTA, MAINE

167-136

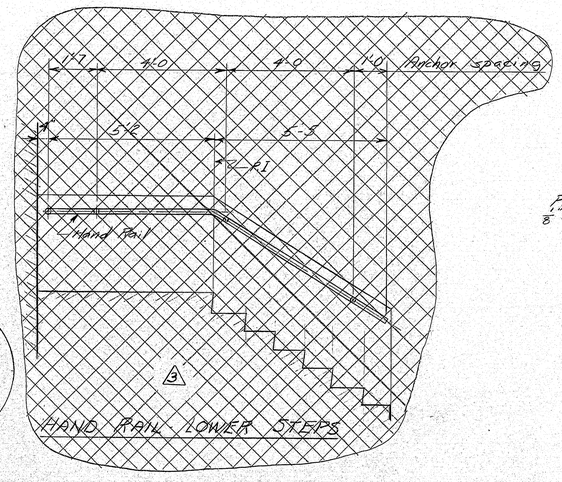
883-1 8900

F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	15	71

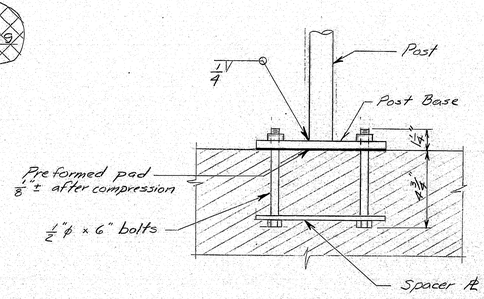


HAND RAIL - UPPER STEPS

Note: All dimensions (except Radius) are to ℄ Pipe.

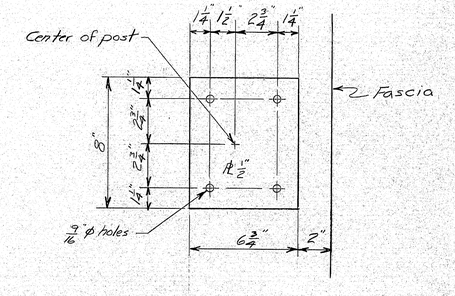


HAND RAIL LOWER STEPS

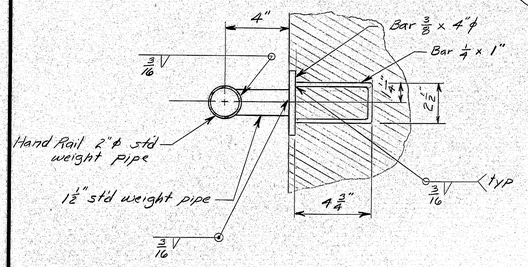


POST ANCHORAGE DETAIL

Anchor bolts shall be ASTM A307 galvanized.
Post base shall be ASTM A36 galvanized.
Spacer plate shall be ASTM A36



POST BASE DETAIL

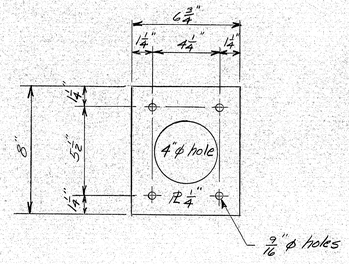


HAND RAIL SECTION
@ ANCHOR

HAND RAIL NOTES

1. Materials for hand rail shall be:
   Pipe - A53 galvanized
   3/8 Bar - A36 galvanized
   1/4 Bar - A36
2. Anchors shall be cast in concrete
3. Hand rail shall be continuous. Not more than one splice shall be used.
4. Ends of railings shall be plugged. Provide 1/2"ϕ holes in bottom of railing at intervals of four feet ± at at 1 inch from lower end of railing.
5. Payment for hand railing includes anchors and will be paid for under Item 507.09, Steel Pipe Hand Railing.
6. All welds shall be ground smooth and galvanized.

Note: Payment for 6' chain link fence includes anchorage and will be paid under Item 607.17 Chain Link Fence - 6 feet.



SPACER PLATE DETAIL

ANCHORAGE FOR 6' CHAIN LINK FENCE

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	JET	11-75
	CHECKED	MVF	11-75
	REVISIONS		
	FIELD CHANGES		

△3 Revision made 7-20-76

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

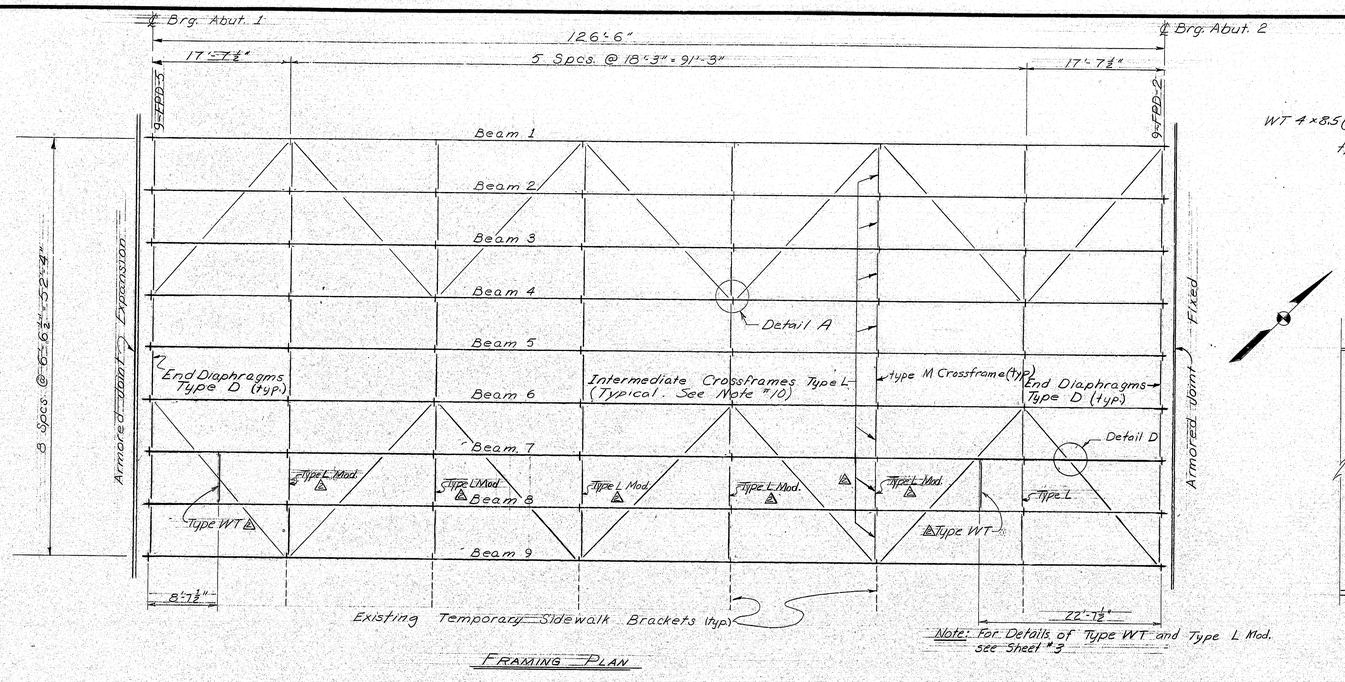
SCENIC OVERLOOK DETAILS

SHEET OF AUGUSTA, MAINE

JANUARY 1968

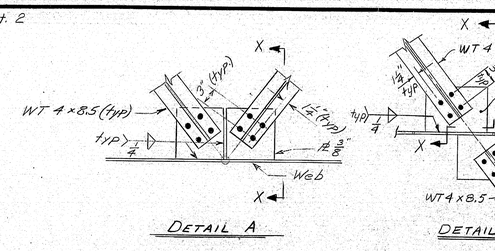
167-137

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	16	71

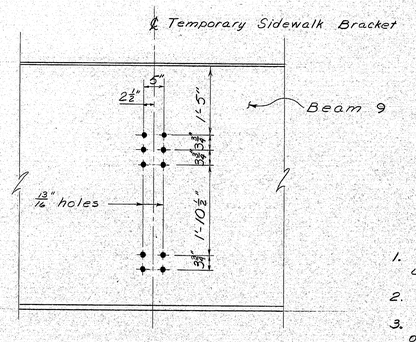


FRAMING PLAN

Note: For Details of Type WT and Type L Mod. see Sheet #3

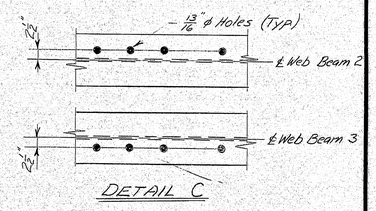


DETAIL A | DETAIL D | SECTION "XX"



DETAIL B

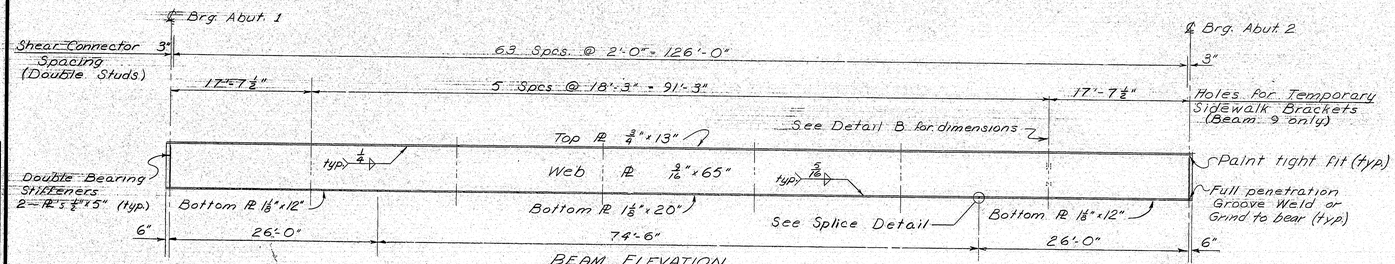
Plug holes with corrosion resistant carriage bolts after use.



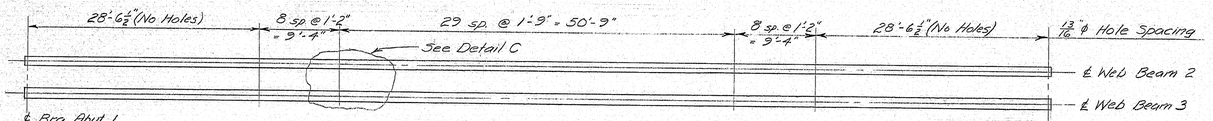
DETAIL C

FABRICATION NOTES

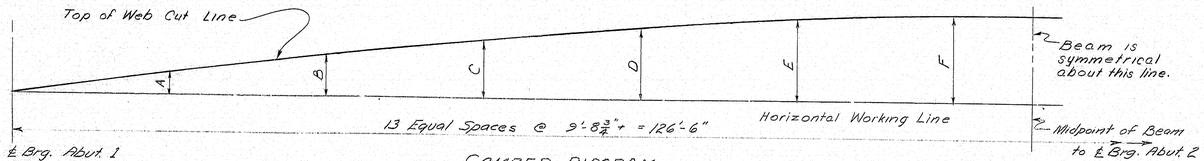
1. All structural steel shall be ASTM A588 unless otherwise noted.
2. All dimensions are horizontal or vertical.
3. All bolts shall be ⅞" ø A325 Type 3, unless otherwise noted. Holes for bolts shall be 15/16" dia. unless otherwise noted
4. Camber ordinates, as shown on this sheet, are computed to compensate for all dead load deflections.
5. No transverse butt weld splices in the flange plates or web plates within 10 feet from the ℄ of span will be allowed
6. Sections of flange plates or web plates between transverse butt weld splices shall be not less than 20 feet in length.
7. Butt weld splices in flanges shall be not closer than one foot from transverse welds in the web plates.
8. Bearing stiffeners shall be plumb after erection and dead loading of the structure.
9. Crossframe or diaphragm connection plates may be either plumb or normal to the top flange.
10. See sheet #4 for crossframe connection plates for beams 2 & 3.
11. Structural steel will be supplied and delivered by the Department, and shall be erected under this contract. Shop details of the structural steel will be supplied to the Contractor.



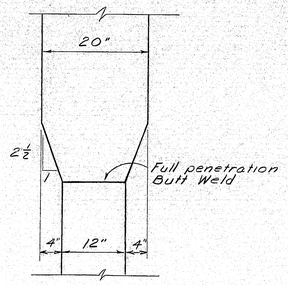
BEAM ELEVATION



PLAN — TOP FLANGE BEAMS 2 & 3



CAMBER DIAGRAM
Half Beam



SPLICE DETAIL

CAMBER (inches)						
Beam	A	B	C	D	E	F
1, 2, 3, 4, 6 & 7	1 3/8	2 9/16	3 1/16	4 1/2	5 1/16	5 3/8
5	1 3/16	2 5/16	3 1/4	4	4 1/2	4 13/16
8 & 9	1 1/16	2 3/4	3 15/16	4 13/16	5 7/16	5 3/4

PROJECT DESIGN ENGINEER		BY	DATE
	DESIGN - DETAILED	JEF	3/75
PLANS	CHECKED	DND	5/75
	REVISIONS	EBC	
	FIELD CHANGES		

JANUARY 1969

⚠ Revision Made 10-28-75

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

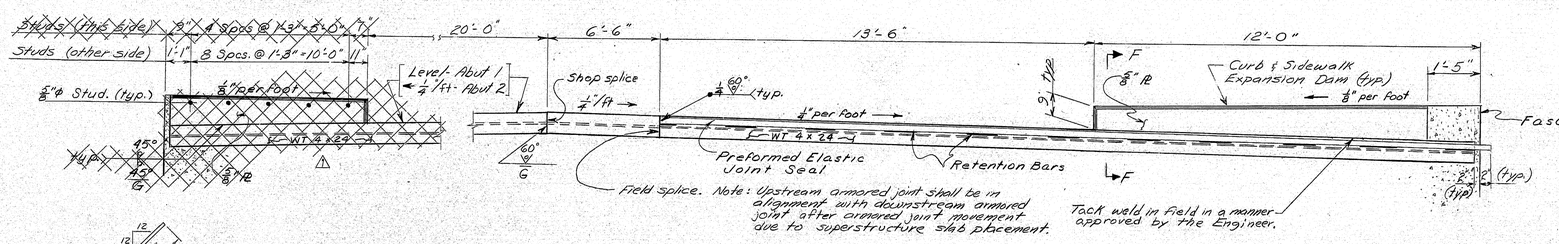
STRUCTURAL STEEL

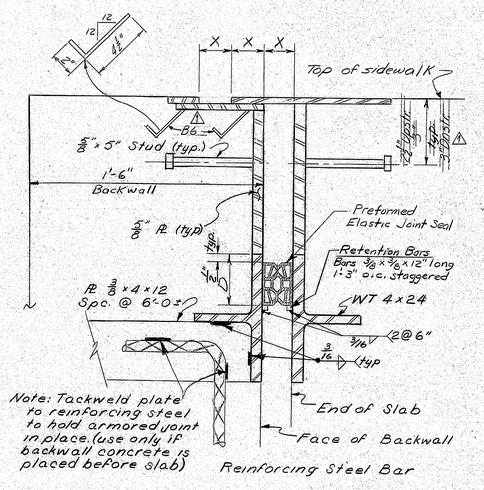
SHEET OF AUGUSTA, MAINE

167-138.

8834 2000

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	17	71





SECTION "FF"

ARMORED JOINT ELEVATION

The Expansion Dam is not to be welded to the 5/8" armored joint plates

Ref: For armored joint details not shown see Standard Details sheet BD 104-73. For curb and sidewalk expansion dam details not shown, see Standard Details sheet BD 105-74

ARMORED JOINT SEAL NOTES

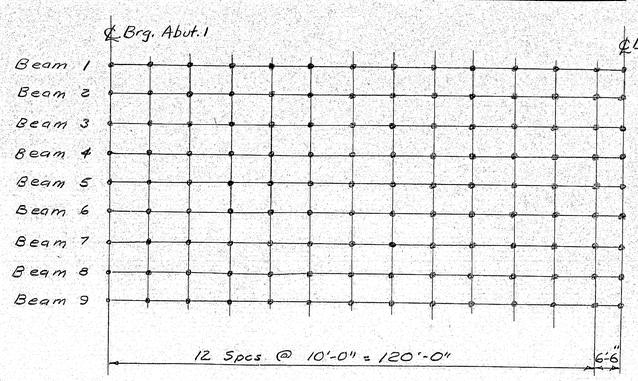
1. The seals furnished shall be as follows:

Location	Movement Rating
Abut. 1	1.5"
Abut. 2	0.875"

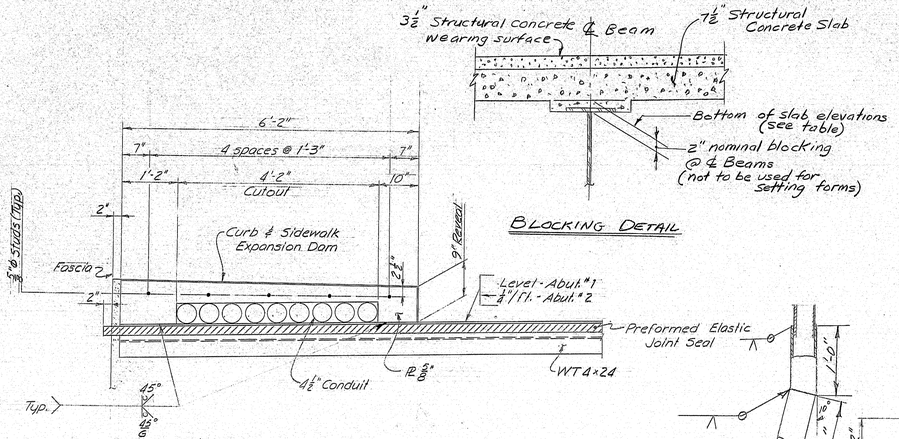
2. The seal characteristics shall be submitted to the engineer for approval prior to the fabrication of the armored joint and the dimensions "X & D" will be established by the Engineer at the time based on the characteristics of the approved seal.
3. The maximum joint opening shall be 3" at -30°F measured parallel to ℄ Construction.
4. The seal will be supplied by the Department. The Contractor shall splice the seal in a manner approved by the Engineer. The seal shall be protected from damage due to field welding.

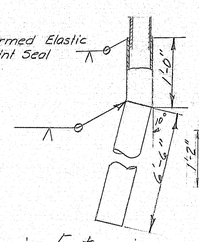
BLOCKING ELEVATIONS

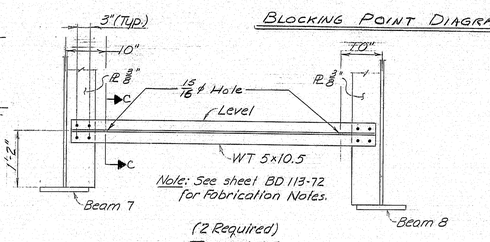
POINT / BEAM	℄ Brg Abut. 1	10'	20'	30'	40'	50'	60'	70'	80'	90'	100'	110'	120'	℄ Brg. Abut. 2
Beam 1	166.56	166.61	166.66	166.69	166.72	166.72	166.69	166.65	166.58	166.50	166.40	166.28	166.16	166.07
Beam 2	166.56	166.63	166.68	166.73	166.76	166.77	166.76	166.72	166.67	166.60	166.51	166.40	166.29	166.21
Beam 3	166.56	166.64	166.70	166.76	166.80	166.82	166.82	166.79	166.75	166.69	166.61	166.51	166.41	166.34
Beam 4	166.56	166.65	166.72	166.79	166.84	166.87	166.88	166.87	166.84	166.79	166.71	166.64	166.55	166.48
Beam 5	166.50	166.58	166.65	166.71	166.76	166.80	166.81	166.81	166.79	166.75	166.69	166.63	166.55	166.50
Beam 6	166.36	166.46	166.54	166.61	166.67	166.71	166.72	166.72	166.70	166.65	166.59	166.51	166.42	166.36
Beam 7	166.23	166.32	166.40	166.48	166.53	166.57	166.58	166.58	166.56	166.51	166.45	166.38	166.29	166.23
Beam 8	166.09	166.19	166.27	166.35	166.40	166.44	166.46	166.46	166.43	166.39	166.32	166.24	166.15	166.09
Beam 9	165.95	166.05	166.14	166.21	166.27	166.31	166.32	166.32	166.29	166.25	166.19	166.11	166.02	165.95

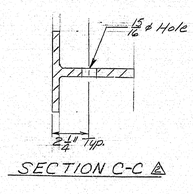


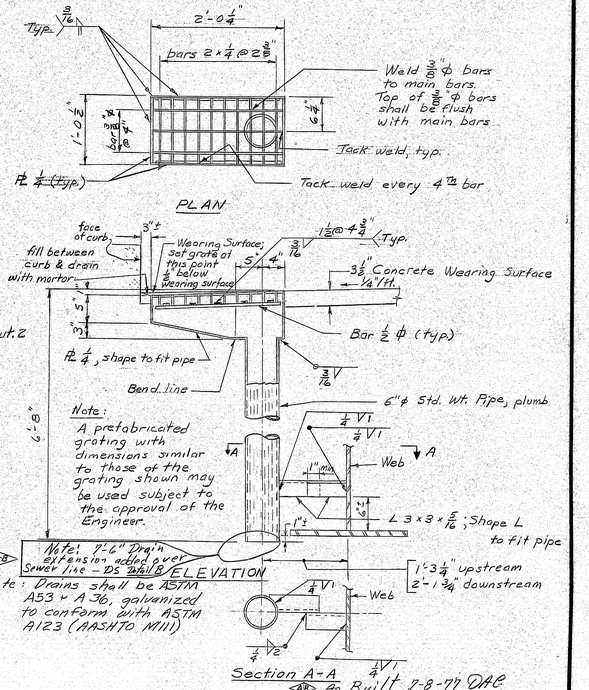
BLOCKING POINT DIAGRAM











PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	JET	3/75
CHECKED	DND	3/75
REVISIONS	ERC	5/76
FIELD CHANGES		

PLANS

JANUARY 1968

As Built 7-8-77 DAE

Revision Made 10-28-75

Revision Made 10-30-75

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

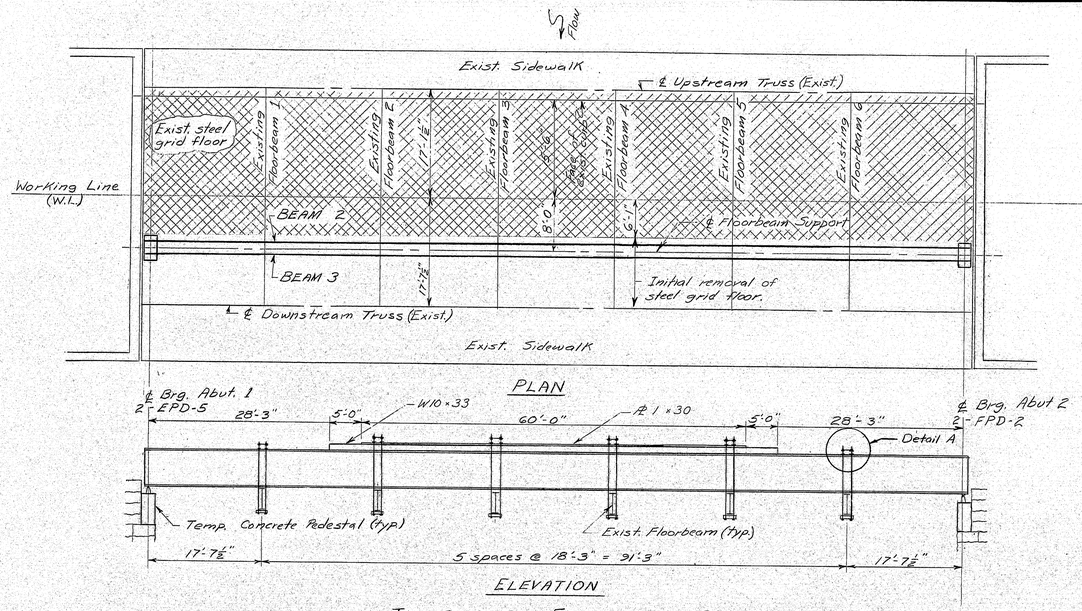
ARMORED JOINT DETAILS

SHEET OF AUGUSTA, MAINE

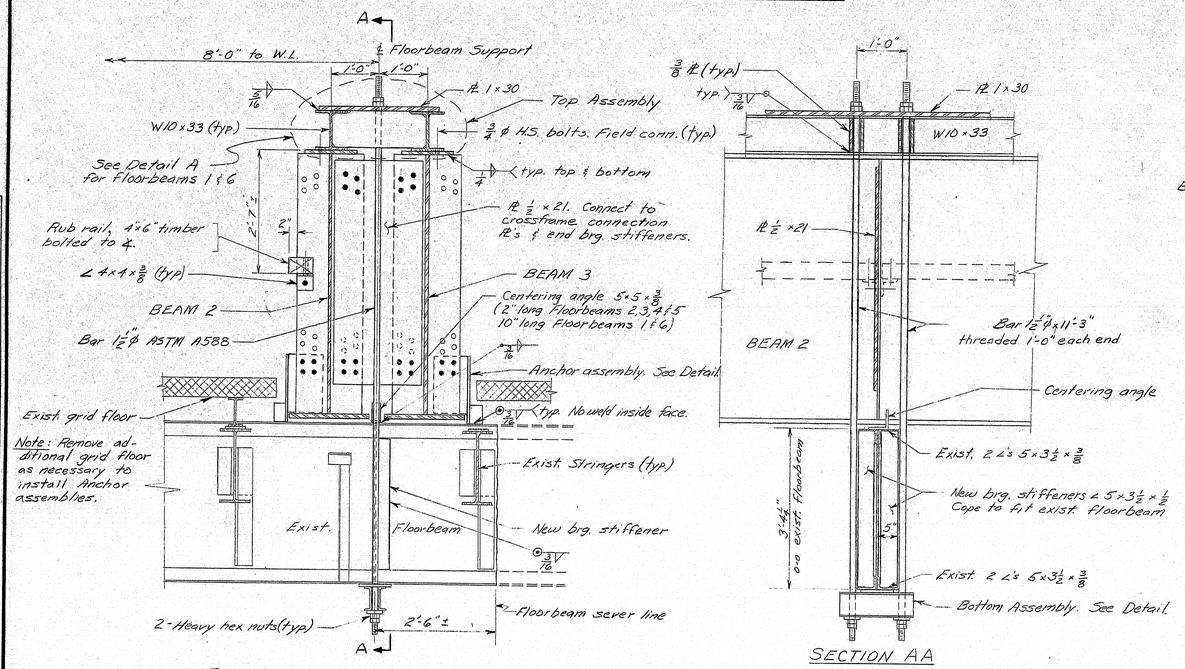
167-139

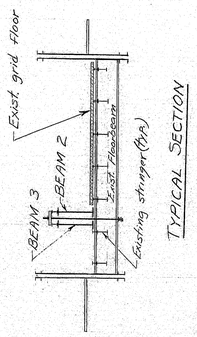
253-1 2500

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	18	71

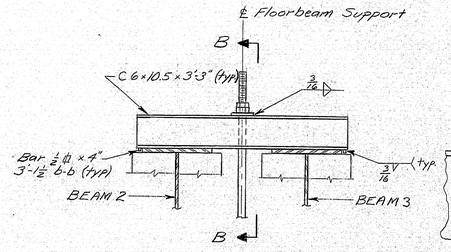


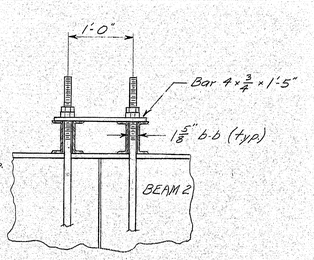
TEMPORARY FLOORBEAM SUPPORT

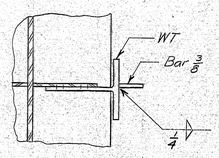


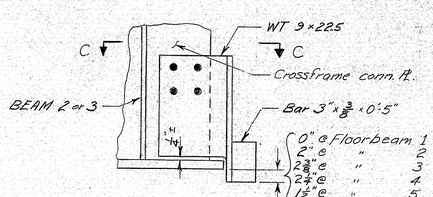


TYPICAL SECTION



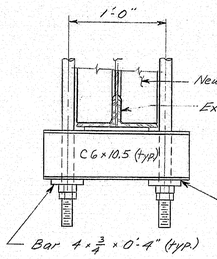


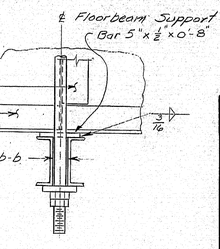




NOTES : TEMPORARY FLOORBEAM SUPPORT

1. BEAM 2, BEAM 3, and associated bearing pedestals shall be re-used in the final construction. (See Framing Plan sheet #2) The anchor bolts shall not be re-used.
2. All structural steel for temporary floorbeam support shall be ASTM A36 except BEAMS 2 & 3, and as otherwise noted.
3. Bolts shall be ⅞ ø H.S. ASTM A325 unless otherwise noted. Bolts used in temporary connections shall not be re-used.
4. Field welding will not be allowed to Beams 2 & 3 except tack welding of the sole plates to the Beams is required. Tack welds shall be removed with care and ground flush before re-use in the final construction.
5. The temporary support system shall be erected in the sequence as follows:
   a) Weld centering angles and new bearing stiffeners to existing floorbeams
   b) Erect beams 2 and 3, connection plates and timber rail.
   c) Erect top assembly to temporary beams
   d) Erect hanger rods and bottom assemblies, tightening to firm contact only with the floorbeams.
   e) The hanger rods shall be further tightened sequentially as follows:
      1). 3 turns of the nuts at floorbeams 3 and 4.
      2) 2⅔ turns of the nuts at floorbeams 2 and 5.
      3) 1½ turns of the nuts at floorbeams 1 and 6.
   f) Erect anchor assemblies
   g) Sever floorbeams 1 and 6. Tighten hanger rods concidentally at floorbeams 1 and 6 to bring floorbeams 1 and 6 to firm contact only with anchor assemblies. Weld anchor assemblies to floorbeams.
   h) Repeat "g" for floorbeams 2 and 5.
   i) Repeat "g" for floorbeams 3 and 4.
6. Structural steel and related materials in the temporary support system that will not be re-used in final construction shall become the property of the Contractor.





BOTTOM ASSEMBLY DETAIL

PLANS	BY	DATE
DESIGN - DETAILED	JEF	1/75
CHECKED	EBC	5/75
REVISIONS		
FIELD CHANGES		

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

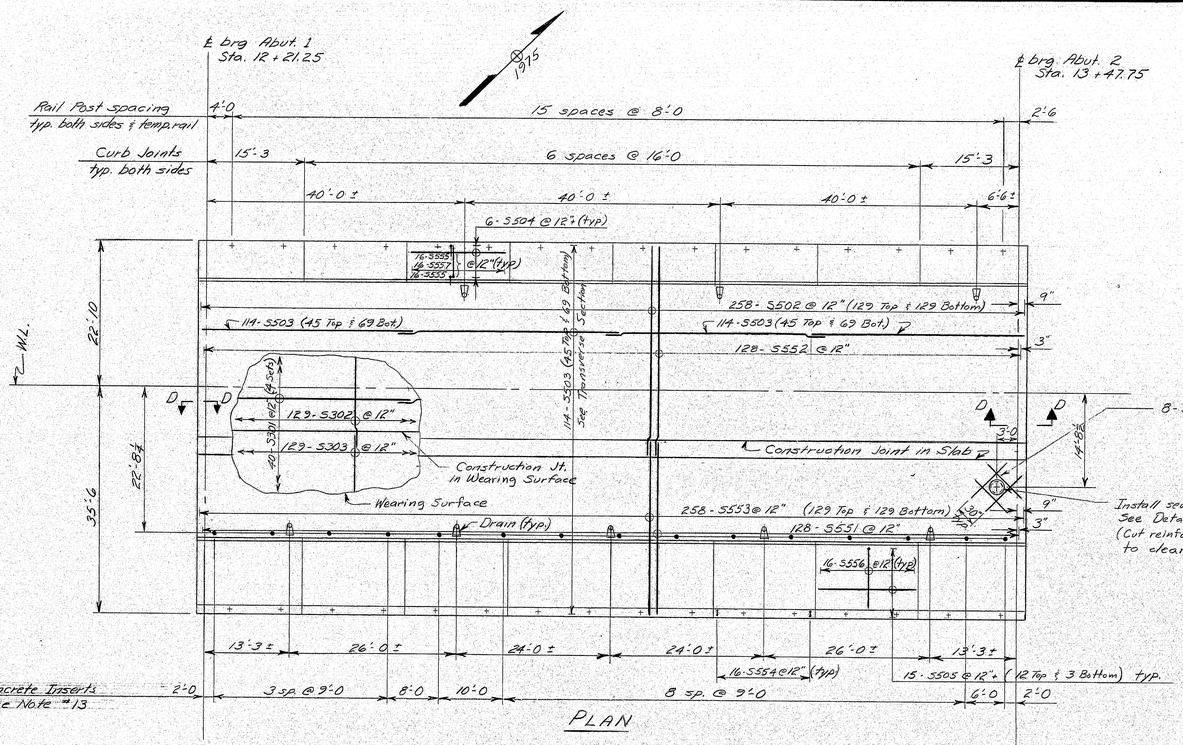
TEMPORARY SUPPORT SYSTEM

SHEET OF AUGUSTA, MAINE

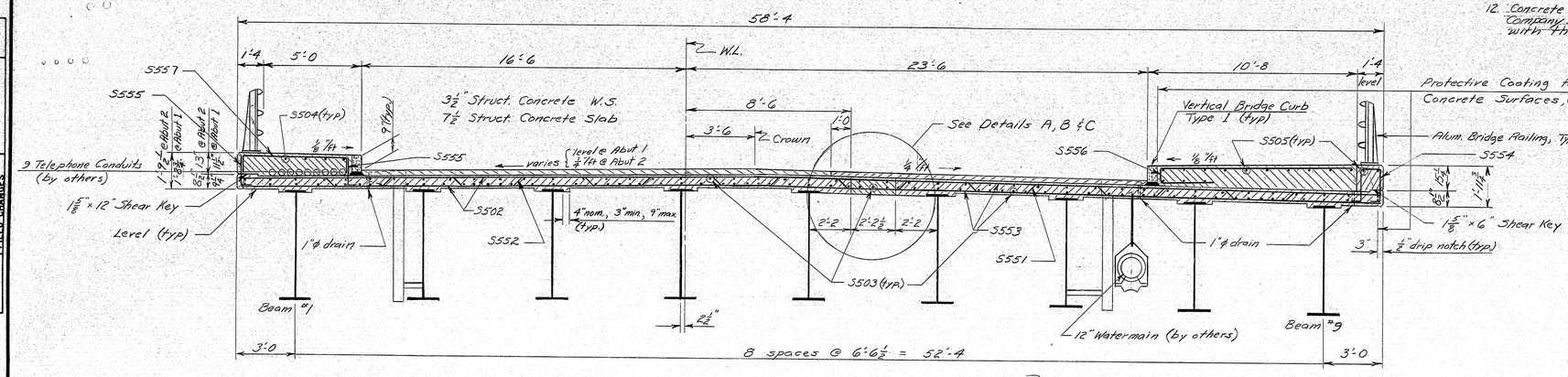
203-1 2060

167-140

F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	19	71



PLAN



TRANSVERSE SECTION

Existing sewer relocated See sheet 25.

SUPERSTRUCTURE NOTES

1. Chamfer all exposed edges of concrete ½ inch unless otherwise noted.
2. Form a 1 inch V-groove on the outside faces of each contraction joint in the curbs and at the joint between the curb and slab.
3. Break the bond in contraction joints in the concrete curbs by a method approved by the Engineer. Do not break the bond in the longitudinal construction joints in the slab and wearing surface.
4. Provide joints in the Vertical Bridge Curb, Type 1, at each contraction joint in the concrete curb.
5. Reinforcing steel shall have a minimum cover of 2 inches unless otherwise specified.
6. Place 1 inch diameter plastic tube drains at 10 foot intervals along the curbs as described in 502.17 of the Standard Specifications.
7. The slab and wearing surface shall be placed continuously between longitudinal joints.
8. Mortar for bedding and for joints in the granite curbs shall contain an approved non-shrink additive.
9. Apply Protective Coating for Concrete Surfaces to the wearing surface, sidewalks, and the fascias to the drip notch.
10. The slab shall have a light broom finish.
11. During traffic maintenance on superstructure slab prior to Wearing Surface placement, a ramp of bituminous material shall be provided from the slab to finished grades of armored joints, deck drains and sewer manhole. Ramp shall be a minimum of 24 inches long. Construction, maintenance, and removal of the ramps shall be considered incidental to Item 510.1201.
12. Concrete inserts will be supplied by the Skowhegan Water Company. The Contractor shall install the inserts flush with the bottom of slab.
13. The Contractor will be allowed to drill holes in the webs of the exterior beams for the purpose of attaching form support brackets. Location of the holes shall be approved by the Engineer. After use, all holes shall be filled with corrosion resistant carriage bolts.

References:
Superstructure details 20
Alum. Bridge Railing, Type C ... 22, 63, 64
Vertical Bridge Curb, Type 1 .. 60

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	JET	11/'71
CHECKED	JET	11/'71
REVISIONS	AWF	
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

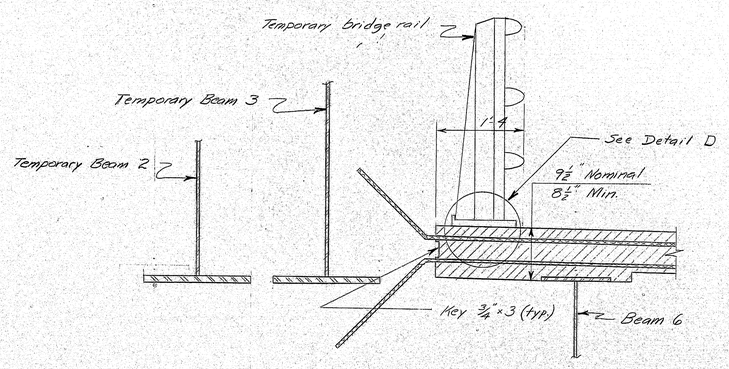
SUPERSTRUCTURE

SHEET OF AUGUSTA, MAINE

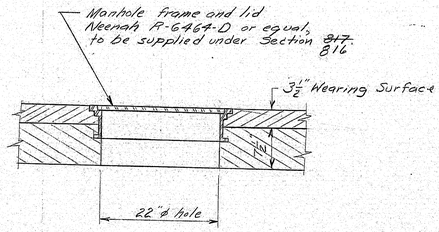
JANUARY 1969

167-141

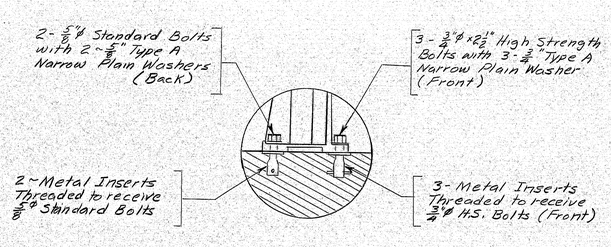
F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	20	71



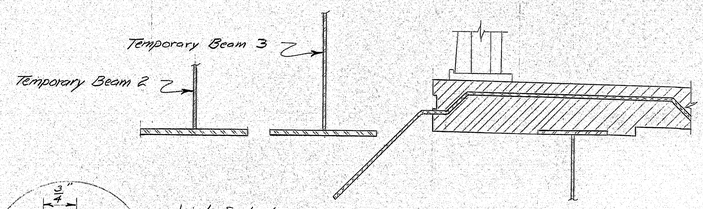
DETAIL A
(Showing bars S553 during Phase 1.



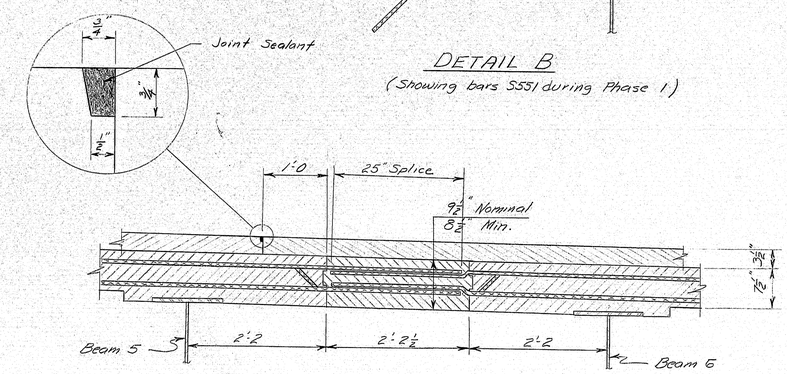
SEWER MANHOLE DETAIL



DETAIL D

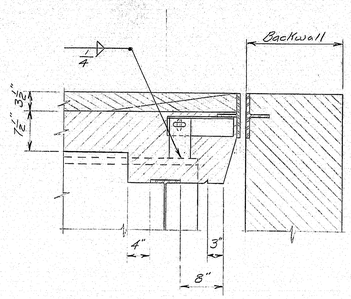


DETAIL B
(Showing bars S551 during Phase 1)



DETAIL C

Note : Bars S551 & S553 are to be bent in the field in a manner approved by the Engineer.



SECTION D-D

NOTES - TEMPORARY BRIDGE RAIL

1. The new upstream bridge railing shall be installed as temporary bridge rail on the superstructure slab.
2. The metal inserts for ¾"ø bolts, shown in Detail "D" shall have a minimum working load of 2500 pounds, and a minimum ultimate strength of 9000 pounds. Other configurations of metal inserts may be used if approved by the Engineer.
3. The contractor may substitute another system of Temporary Bridge Rail of similar strength as approved by the Engineer.
4. The temporary bridge railing shall be included for payment under Item 510.1201.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	JET	11/87
	DESIGNED	JET	11/87
	REVISIONS	MJF	11/87
	FIELD CHANGES		

JANUARY 1989

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

SUPERSTRUCTURE DETAILS

SHEET OF AUGUSTA, MAINE

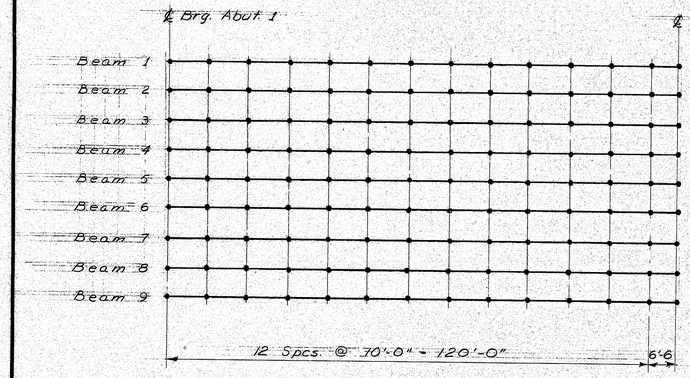
167-142

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
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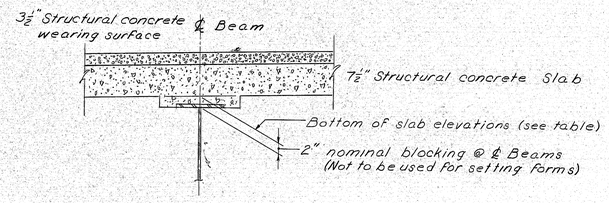
BLOCKING ELEVATIONS

POINT / BEAM	℄ Brg. Abut. 1	10'	20'	30'	40'	50'	60'	70'	80'	90'	100'	110'	120'	℄ Brg. Abut. 2
Beam 1	166.11	166.20	166.29	166.36	166.42	166.46	166.47	166.47	166.44	166.40	166.34	166.26	166.17	166.11
Beam 2	166.25	166.34	166.43	166.50	166.55	166.59	166.61	166.61	166.58	166.54	166.47	166.40	166.31	166.25
Beam 3	166.38	166.48	166.56	166.63	166.69	166.73	166.75	166.74	166.72	166.67	166.61	166.53	166.45	166.38
Beam 4	166.52	166.61	166.70	166.77	166.83	166.86	166.88	166.88	166.85	166.81	166.75	166.67	166.58	166.62
Beam 5	166.54	166.62	166.69	166.75	166.80	166.84	166.85	166.85	166.83	166.79	166.73	166.67	166.59	166.54
Beam 6	166.40	166.50	166.58	166.65	166.71	166.75	166.76	166.76	166.74	166.69	166.63	166.55	166.46	166.40
Beam 7	166.27	166.36	166.44	166.52	166.57	166.61	166.63	166.62	166.60	166.55	166.49	166.42	166.33	166.27
Beam 8	166.13	166.23	166.31	166.39	166.44	166.48	166.50	166.50	166.47	166.43	166.36	166.28	166.19	166.13
Beam 9	165.99	166.09	166.18	166.25	166.31	166.33	166.36	166.36	166.33	166.29	166.23	166.15	166.06	165.99

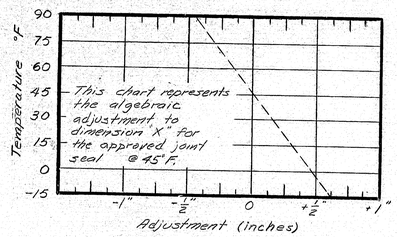
Void
A.H.R. 8 Aug. 1976



BLOCKING POINT DIAGRAM



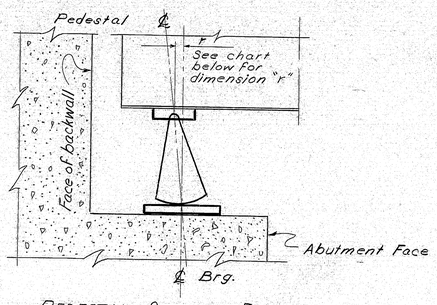
BLOCKING DETAIL



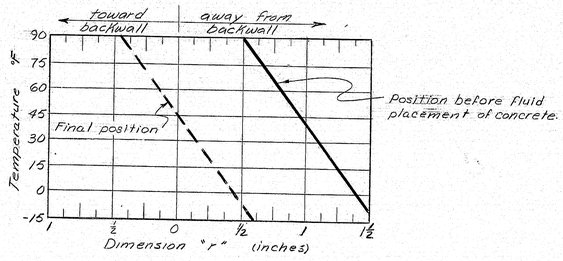
ARMORED JOINT ADJUSTMENT - ABUT 1

Note: It is anticipated that the armored joint will open ⅛" due to superstructure dead loads at Abut 1 and open 15/16" due to superstructure dead loads at Abut 2.

Note: Movements due to superstructure dead loads are theoretical. The contractor is responsible for setting the bearing pedestals in the final position after superstructure dead loads.



PEDESTAL SETTING DETAIL



EXPANSION PEDESTAL - SETTING CHART

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	JET	
CHECKED	DMD	
REVISIONS	EBC	
FIELD CHANGES		

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

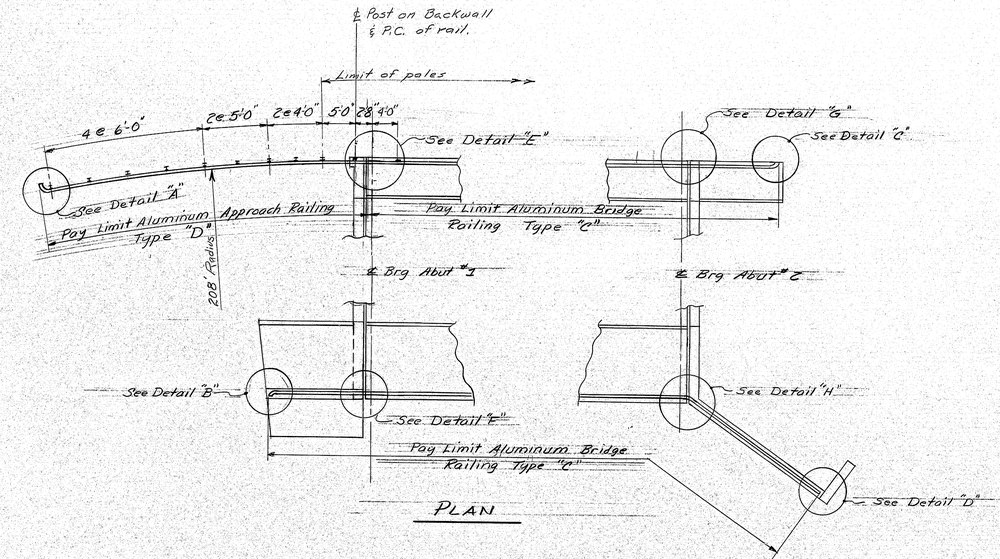
BOTTOM OF SLAB ELEVATIONS

SHEET OF AUGUSTA, MAINE APRIL 1975

167-143

[redacted]

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	22	71



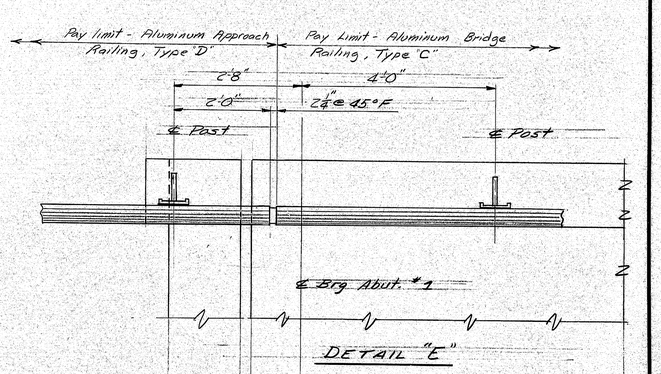
PLAN

NOTE:

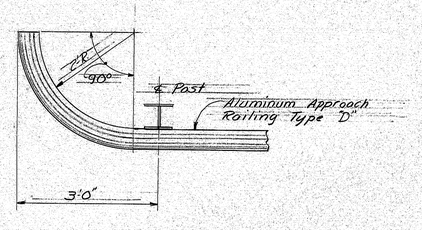
1 — Poles on Aluminum Approach Railing, Type "D" will be considered incidental to Pay Item 507.153.

2 — All plus or minus (±) dimensions are to be verified in field

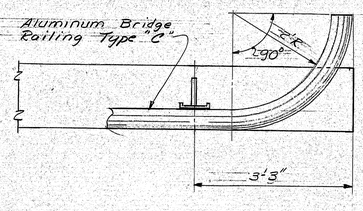
3 — Post on backwall in Detail "E" shall be same as post for Aluminum Bridge Railing, Type "C," but shall be included for payment in Aluminum Approach Railing, Type "D".



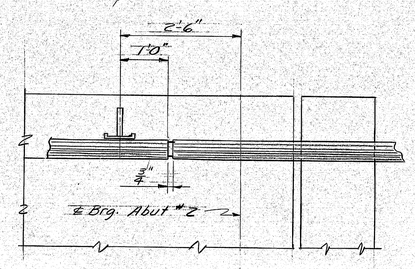
DETAIL "E"



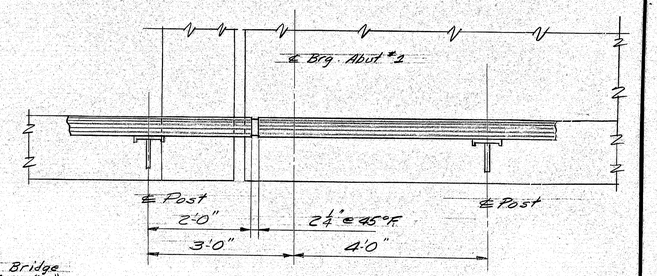
DETAIL "A"



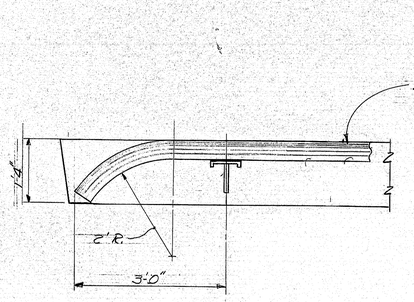
DETAIL "C"



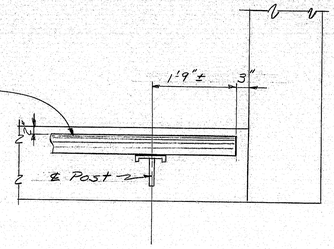
DETAIL "G"



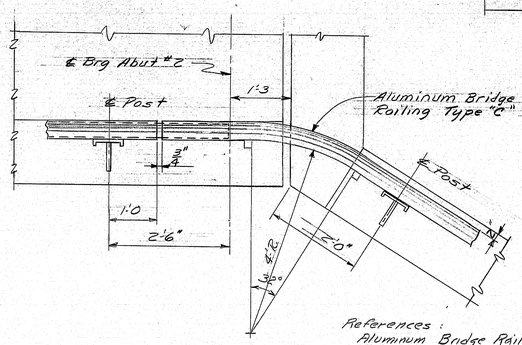
DETAIL "F"



DETAIL "B"



DETAIL "D"



DETAIL "H"

References :
Aluminum Bridge Railing, Type C 63
Pole Panels 64
Aluminum Approach Railing, Type D 65

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	JET	2-82
	CHECKED	RWN	11-82
	REVISIONS	MJF	4-83
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

ALUMINUM RAILING

SHEET OF AUGUSTA, MAINE

167-144

JANUARY 1968

803-1 8966

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
			Abutment No. 1
A401	10	24'-6"	Backwall
A402	10	33'-2"	Backwall
A403	7	15'-0"	Sidewalk
A404	11	9'-10"	Sidewalk
A502	7	12'-10"	Breastwall
A503	75	3'-8"	Bridge Seat
A504	10	8'-0"	Breastwall
A505	4	8'-0"	Backwall
A506	6	14'-5"	Bridge Seat
A507	6	11'-9"	Bridge Seat
A508	6	33'-2"	Bridge Seat
A510	80	7'-0"	Bridge Seat
			Abutment No. 2
A420	10	23'-6"	Backwall
A421	10	33'-2"	Backwall
A520	6	4'-0"	Dowels Breastwall
A521	12	16'-0"	Breastwall
A522	12	14'-6"	Breastwall
A523	17	9'-6"	Breastwall
A524	1	12'-0"	Breastwall
A525	6	14'-5"	Breastwall
A526	6	11'-0"	Bridge Seat
A527	8	6'-7"	Brestwall
A528	19	5'-6"	Brestwall
A529	17	7'-6"	Wing
A530	7	24'-6"	Wing
A531	80	4'-6"	Bridge Seat
A532	80	6'-2"	Backwall
A533	6	33'-2"	Bridge Seat
			Temporary Pedestals
A590	32	3'-8"	Temp. Ped.
A591	20	9'-0"	Temp. Ped.

MARK	NO.	LENGTH	LOCATION
A701	33	14'-0"	Abut. Slab
A801	4	10'-0"	Backwall

MARK	NO.	LENGTH	LOCATION
A511	24	16'-0"	Abut. Slab
A512	12	14'-0"	Abut. Slab
A513	2	14'-6"	Curb
A514	15	12'-6"	Ret. Wall
A515	16	14'-6"	Ret. Wall
A534	2	10'-4"	Sidewalk
A535	16	8'-0"	Wing
A536	10	7'-0"	Wing
A537	26	6'-0"	Sidewalk
A538	12	12'-6"	Sidewalk
540	14	4'-0"	Wing-dowels

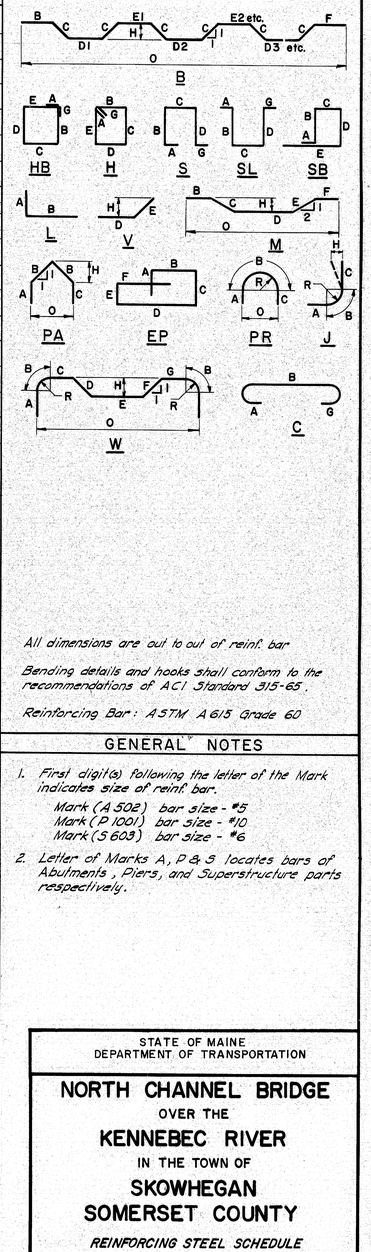
BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
						Abutment No. 1								
A550	34	5'-6"	L	1'-10"	3'-8"									Bridge Seat
A551	7	14'-8"	L	3'-8"	11'-0"									Breastwall
A552	9	6'-4"	S		2'-10"	8"	2'-10"							Backwall
A553	32	6'-10"	S		2'-10"	1'-2"	2'-10"							Backwall
A554	19	3'-10"	V				2'-4"	1'-6"			1'-0 3/4"			Backwall & Slab
A555	9	6'-8"	HB	6"	1'-8"	1'-2"	1'-8"	1'-2"		6"				Backwall
A557	15	5'-7"	SL	6"	1'-9 1/2"	1'-0"	1'-9 1/2"			6				Abut. Slab Curb
A558	15	13'-2"	L	1'-8"	11'-6"									Ret. Wall
A559	2	10'-3"	S	6"	1'-8"	3'-11"	1'-8"			6"				Backwall
						Abutment No. 2								
A560	19	8'-0	V				4'-0"	4'-0"			3'-4 3/4"			Breastwall
A561	39	5'-10"	L	2'-2"	3'-8"									Bridge Seat
A562	40	6'-6"	S		2'-10"	1'-2"	2'-10"							Backwall
A563	2	6'-0"	S	6"	2'-0"	1'-0"	2'-0"			6"				Curb
A564	2	10'-3"	S	6"	1'-8"	5'-11"	1'-8"			6"				Backwall
A565	24	4'-8"	S		1'-9"	1'-2"	1'-9"							Wing Wall
A566	2	13'-8"	V				10'-10"	1'-10"			4 1/2"			Sidewalk
A651	13	5'-8"	S	6"	1'-10"	1'-0"	1'-0"			6"				Side Walk
A567	7	2'-8	L	6"	2'-2									Backwall, sidewalk
						Temporary Pedestals								
A595	10	6'-8	L	3'-2"	3'-6"									

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	23	71

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.

Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   Mark (A502) bar size - #5
   Mark (P1001) bar size - #10
   Mark (S603) bar size - #6
2. Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.

PLANS

	DATE	BY
DESIGN - DETAIL		
CHECKED	11/75	
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

REINFORCING STEEL SCHEDULE

SHEET OF AUGUSTA, MAINE

167-145

REINFORCING STEEL SCHEDULE

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
			Scenic Overlook
B501	10	16'-0"	Eastwall
B502	2	11'-0"	Eastwall
B503	2	6'-0"	Eastwall
B504	8	3'-10"	Eastwall
B505	8	5'-6"	Eastwall
B506	8	7'-3"	Eastwall
B507	4	7'-9"	Eastwall
B508	8	18'-0"	Eastwall
B509	13	8'-5"	Eastwall
B510	4	22'-6"	Cap
B511	4	16'-6"	Cap
B512	15	5'-2"	Steps
B513	4	3'-9"	Steps
B514	3	5'-0"	Steps
B515	6	7'-0	Steps
B516	6	10'-8"	Steps
B517	2	8'-0	Steps
			Superstructure
S502	258	33'-4"	Slab
S503	456	33'-4"	Slab
S504	48	15'-8"	Curb
S505	120	15'-8"	Curb
S601	8	8'-0"	Slab
S301	160	33'-1	Wearing Surface
S302	129	25'-4	Wearing Surface
S303	129	15'-10	Wearing Surface

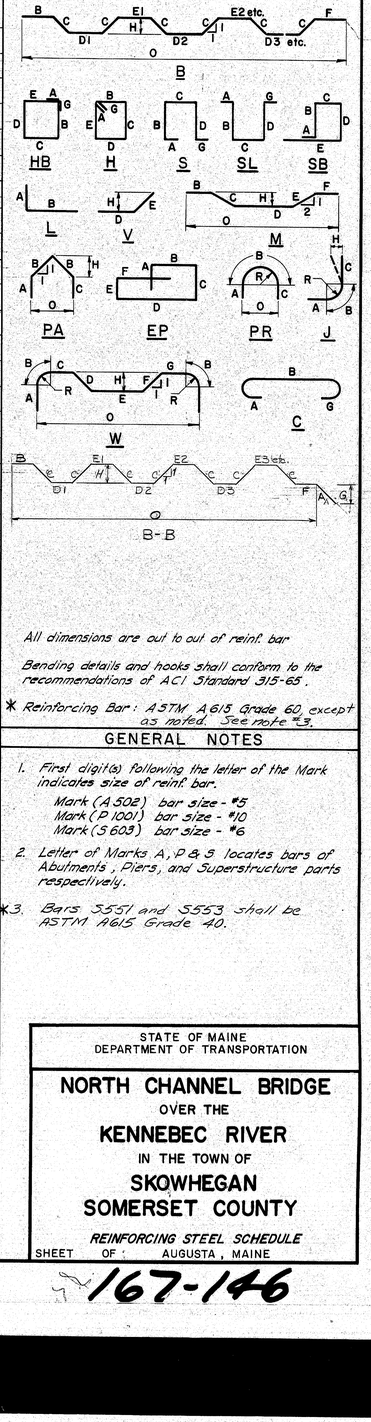
BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
					Scenic Overlook									
B551	12	3'-4"	L	1'-8	1'-8									Eastwall
B552	12	4'-8"	S		2'-0"	8"	2'-0"							Eastwall
B553	4	5'-8"	L	1'-2"	4'-6"									Eastwall
B554	13	6'-0"	S		2'-5"	1'-2"	2'-5"							Eastwall
B555	27	5'-4	S	6"	1'-7"	1'-2"	1'-7"			6"				Cap
B556	4	15'-2"	V				5'-4"	9'-10"			5'-3½"			Steps
B557	6	11'-7"	V				4'-4"	7'-3"			3'-11			Steps
B558	11	4'-8	S		2'-0"	8"	2'-0"							Steps
B559	3	6'-6"	L	5'-0"	1'-6"									Steps
B560	6	8'-6"	L	7'-0"	1'-6"									Steps
B561	2	11'-7	V				5'-3	6'-4			3'-4			Steps
					Superstructure									
S551*	128	27'-11"	B-B	2'-0"	4'-5"	6½	2'-7⅞"	3'-2"	4"	1'-5"	4½"	24'-9"		Slab
						x7	x3	x3						
S552	128	34'-10"	B-B		4'-5"	6½	2'-7⅞"	3'-2"	2'-4½"		4½"	33'-4"		Slab
						x8	x4	x4						
S553*	258	26'-9"	V				24'-9"	2'-0"			1'-5"			Slab
S554	128	5'-2"	S	6"	1'-7"	1'-0"	1'-7"			6"				Slab & Curb
S555	256	1'-11"	L	6"	1'-5"									Slab & Curb
S556	128	13'-7"	S		2'-6"	9"	9'-10"							Curb
S557	128	7'-0	S		9"	5'-6	9"							Sidewalk

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	24	71

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.

* Reinforcing Bar: ASTM A615 Grade 60 except as noted. See note *3.

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   Mark (A 502) bar size - #5
   Mark (P 1001) bar size - #10
   Mark (S 603) bar size - #6
2. Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.
3. Bars S551 and S553 shall be ASTM A615 Grade 40.

PLANS — DESIGN - DETAIL — CHECKED — REVISIONS — FIELD CHANGES — BY — DATE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

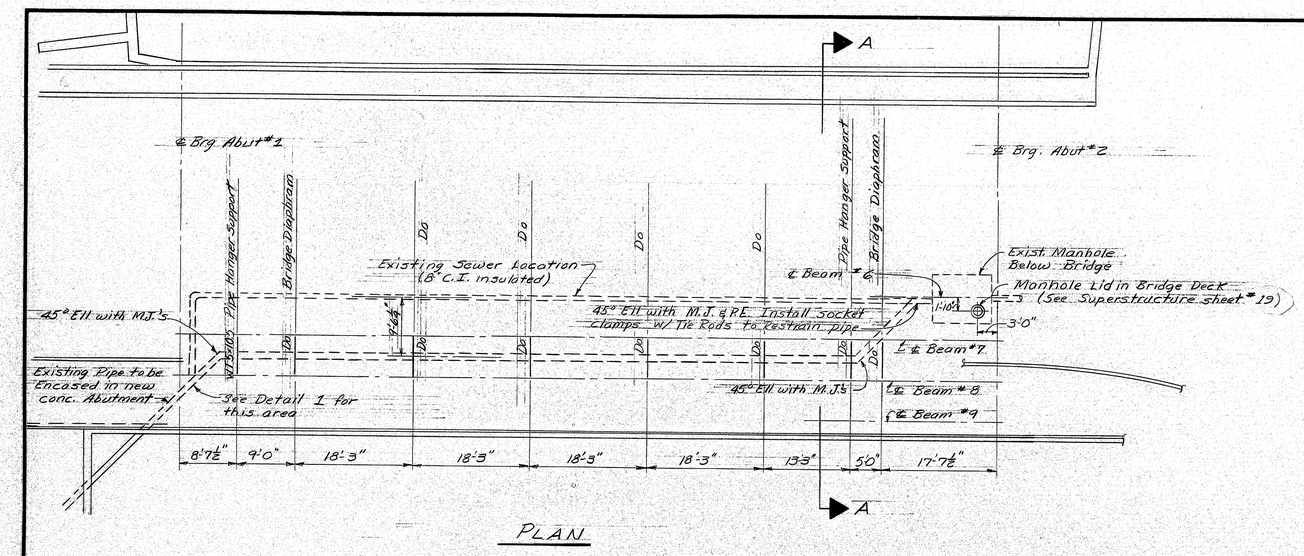
NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

REINFORCING STEEL SCHEDULE

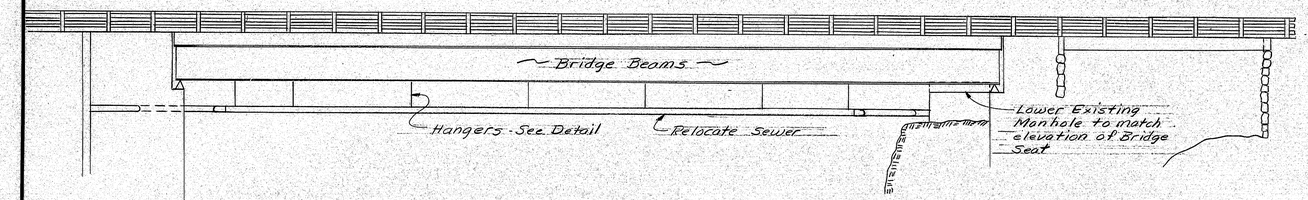
SHEET OF AUGUSTA, MAINE

167-146

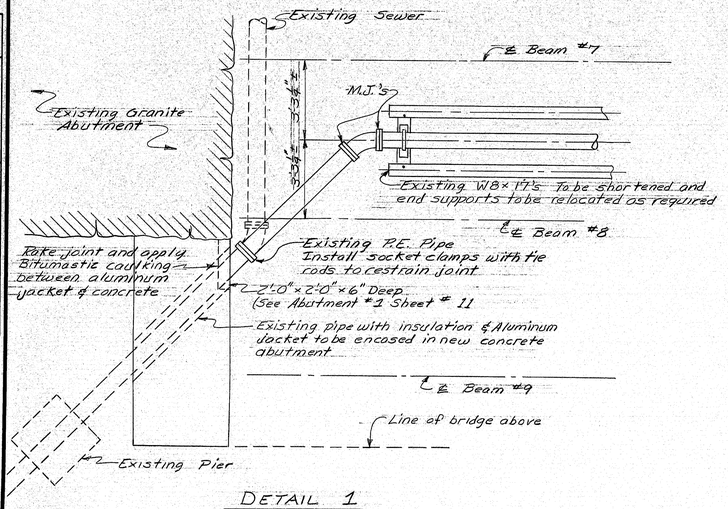
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	25	71



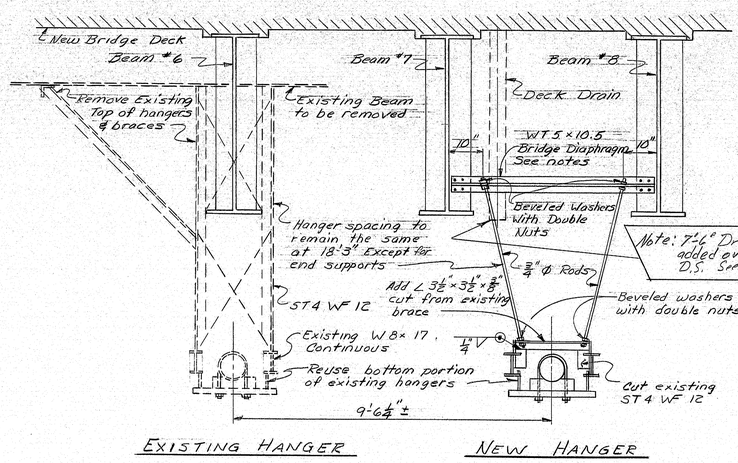
PLAN



ELEVATION

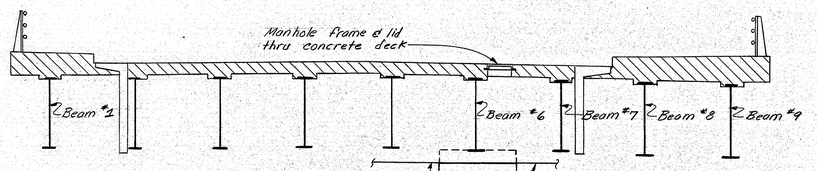


DETAIL 1

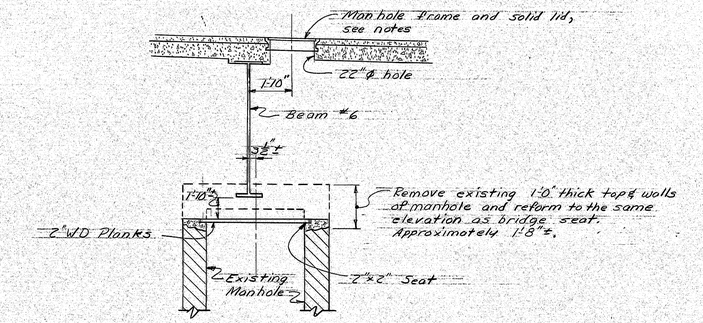


EXISTING HANGER NEW HANGER

HANGER DETAILS



SECTION A-A



MANHOLE DETAIL

GENERAL NOTES

Sewer Relocation must be coordinated with construction of bridge. The top of the manhole is to be lowered and after placement of the 3 downstream beams the sewer is relocated to permit removal of the existing bridge.

Structural Steel Supports, incl. hangers and beams, are to be wire brushed and one 5 mil coat of carbomastic 15, or equal applied, all per paint mfr's recommendations

During Piping Tie-ins and Relocation, it is recommended that a pump be installed in manhole and a 4" temporary line be run to a manhole located approx. 350' away behind Peolers' Shoe Store, or run across the river and emptied into the existing 8" Gravity line.

Existing Pipe (cast iron class 150 push on joints w/mechanical joint fittings) may be reused along with any insulation and jacketing that is not damaged. Replace damaged sections with material of equal quality. New Pipe & Fittings to be cast iron class 150.

Manhole for Bridge Deck is to be furnished as part of this work; manhole to be heavy duty pressure type, water tight with C/S bolted lid, Neenah No. R-64-64-D or equal.

Note: 7'-4" Drain extension added over sewer line D.S. See Detail "B" Sheet 17

As Built 7-8-77 DAB

NOTE:
The information on this plan has been transcribed from Kleinschmidt & Dutting plan B-933.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN - DETAILED	
	CHECKED	
	REVISIONS	
	FIELD CHANGES	

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

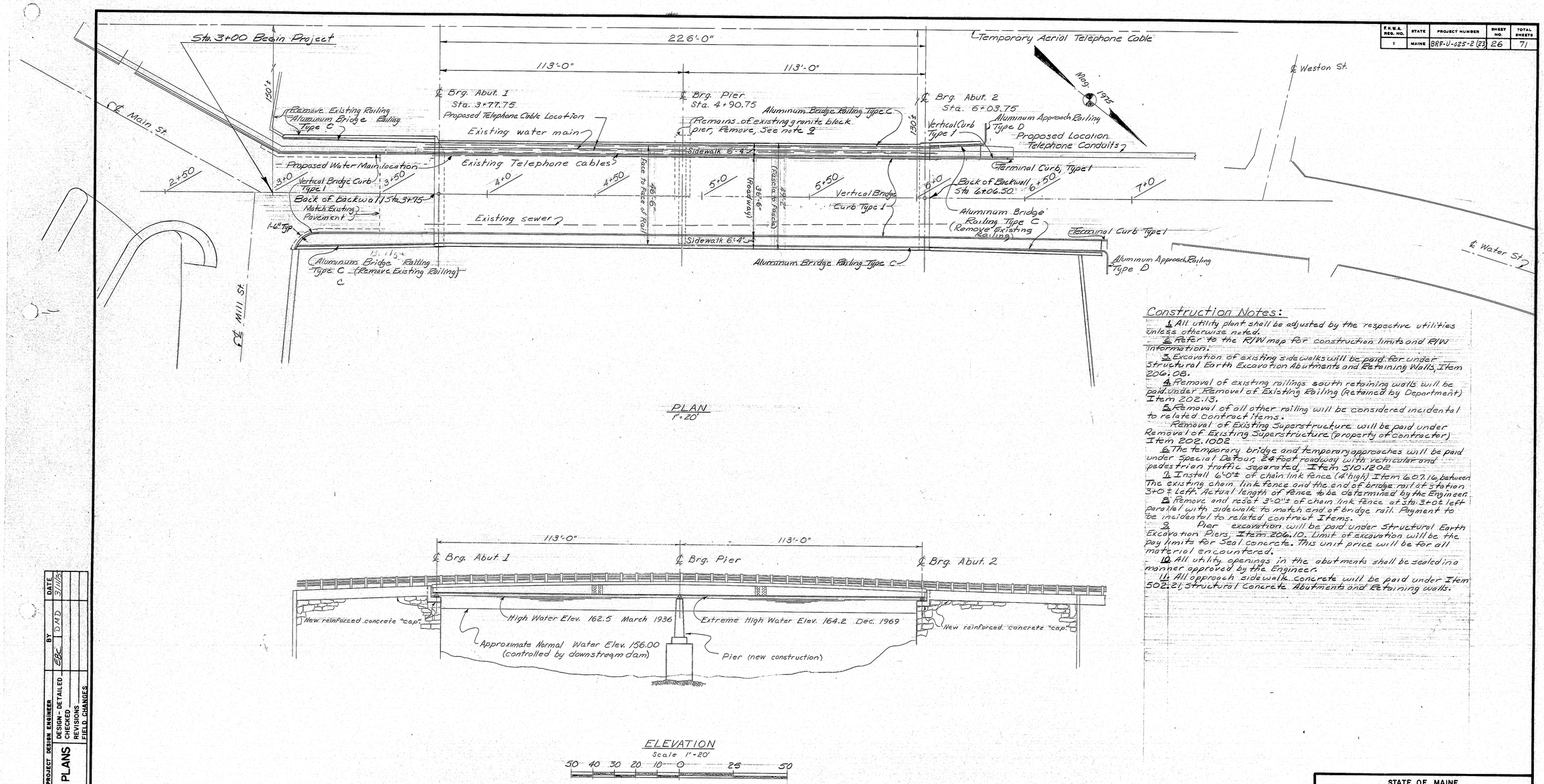
NORTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

SEWER RELOCATION

SHEET OF AUGUSTA, MAINE

167-147

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	26	71



PLAN
1"=20'

ELEVATION
Scale 1"=20'

50 40 30 20 10 0 25 50

Construction Notes:

1. All utility plant shall be adjusted by the respective utilities unless otherwise noted.
2. Refer to the R/W map for construction limits and R/W information.
3. Excavation of existing sidewalks will be paid for under Structural Earth Excavation Abutments and Retaining Walls, Item 206.08.
4. Removal of existing railings south retaining walls will be paid under Removal of Existing Railing (Retained by Department) Item 202.13.
5. Removal of all other railing will be considered incidental to related contract items.
   Removal of Existing Superstructure will be paid under Removal of Existing Superstructure (property of Contractor) Item 202.1002
6. The temporary bridge and temporary approaches will be paid under Special Detour, 24 foot roadway with vehicular and pedestrian traffic separated, Item 510.1202
7. Install 6'-0"± of chain link fence (4' high) Item 607.16 between The existing chain link fence and the end of bridge rail at station 3+0 ± Left. Actual length of fence to be determined by the Engineer.
8. Remove and reset 3'-0"± of chain link fence at 3+0 3+03 left parallel with sidewalk to match end of bridge rail. Payment to be incidental to related contract items.
9. Pier excavation will be paid under Structural Earth Excavation Piers, Item 206.10. Limit of excavation will be the pay limits for Seal concrete. This unit price will be for all material encountered.
10. All utility openings in the abutments shall be sealed in a manner approved by the Engineer.
11. All approach sidewalk concrete will be paid under Item 502.21 Structural Concrete, Abutments and Retaining walls.

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	EBC	DMD 3/1976
CHECKED		
REVISIONS		
FIELD CHANGES		

PLANS

JANUARY 1969

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

GENERAL PLAN

SHEET OF AUGUSTA, MAINE MARCH 1975

167-148

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	27	71

20.75' Transition

240' Vertical Curve E = -2.70'

℄ Brg. Pier

PVC 3+70.75 167.48

PVT 6+10.75 162.48

Existing Profile Grade

+4.5%

-4.5%

Proposed Profile Grade

Extreme High Water Elev. 164.2 Dec. 1969

High Water Elev. 162.5 March 1936

Down Stream

Pier (New Construction)

Up Stream

Existing Pier (See Foundation Survey)

PVI Sta. 4+90.00 Elev. 172.88

Elev. 170.16

New Construction

Existing

3+50 4+0 +50 5+0 +50 6+0 6+50 7+0

166.59 168.63 169.87 169.52 167.94 166.62

PROFILE
(South Channel)

TBM "J"
Top of yellow bolt
Sta. 6+09 24' Lt.
Elev. 167.58'

℄ Brg. Abut. 2
Sta. 6+03.75

(New) ℄ Brg. Abut. 1
Sta. 3+77.75

℄ Brg. Pier

Bridge Rail

New Fascia

Sidewalk 6'-2"

36'-6" (Face of Backwall) Existing

Roadway

Sidewalk 6'-4" New

4" Cast Iron Forced Main

Fascia (New)

N 39°-30' W

Sta. 3+76 (Back of Backwall) (Existing)

180°-01'-00"

℄ Temporary Bridge (Approx.)

Granite Retaining Wall

3'-6" High Chain Link Fence

Remove chain link fence to meet bridge rail

P-K nails in joints of granite wall (circled yellow)

Apartment over Grocery Store

Dirt Drive

1 Story Wood Frm. (vacant)

Gravel Drive

2½ Story Wood Frame -- Apt. over Flower Shop

Granite

Curb

CMP

Hydrant

Catch Basin

Gate

SMH

MAIN St. (Paved)

To Waterville

Bituminous curb

Sidewalk

Old Foundation

Survey ℄

Island

MILL St. (Paved)

Signs

Retaining Walls

Paved Parking Area for Shopping Center

8" Maples

12" Elm

24" Elm

Paved Parking Area

Gate

Catch Basin

Curb

Flag pole, cannon & granite boulder with plaque on concrete slab

Asphalt

Spruce

Remove one course of stone and cap with reinforced concrete. (Typ. 4 Wings)

Retaining Walls

Sidewalk

Granite

Smith Blvd.

Rail Road

℄ Railroad

Flow

℄ Floating Walk

Concrete Walk

DAM 7

24'-0 Hot Bituminous Pavement (typical both approaches) Payment will be incidental to item 510.1202 Special Detour South Channel, 24' Roadway Width, Vehicular and Pedestrian Traffic Separated.

LEGEND

WATER MAIN	—W—
SEWER	—S—
TELEPHONE (underground)	—T—
ELECTRICITY	—E—

Mag. 1975

1975

SCALE

50 40 30 20 10 0 25 50

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	DMD	3/3/75
CHECKED	RJL	10-23
REVISIONS		
FIELD CHANGES		

Survey Plotted

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

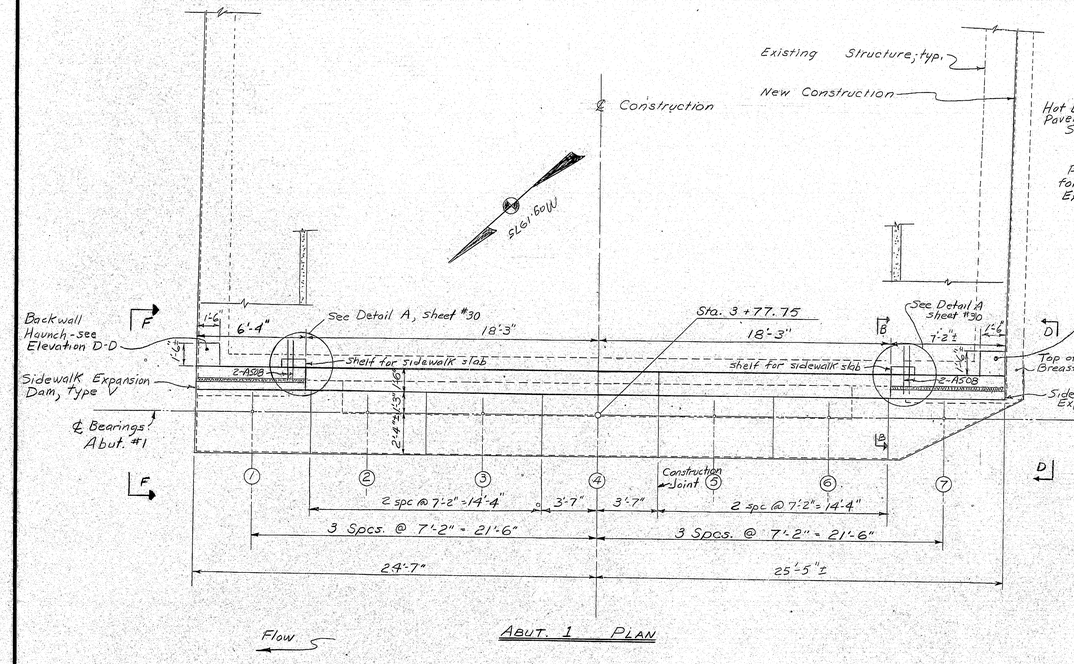
SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

SURVEY

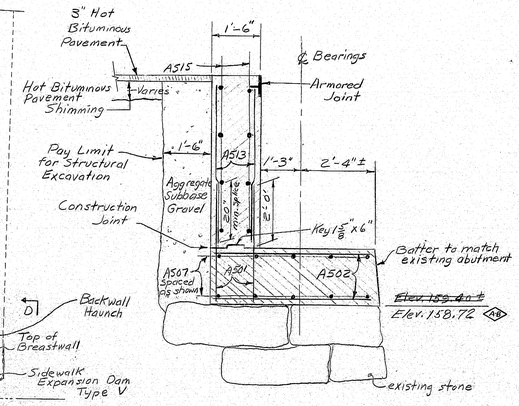
SHEET OF AUGUSTA, MAINE

167-149

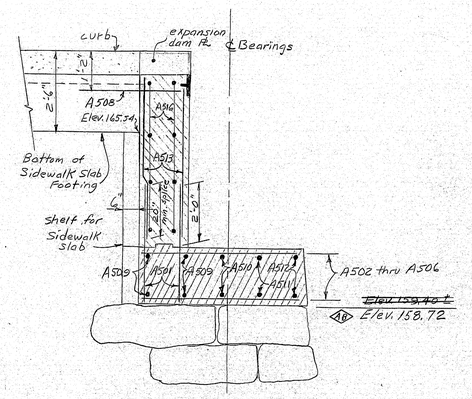
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	28	71



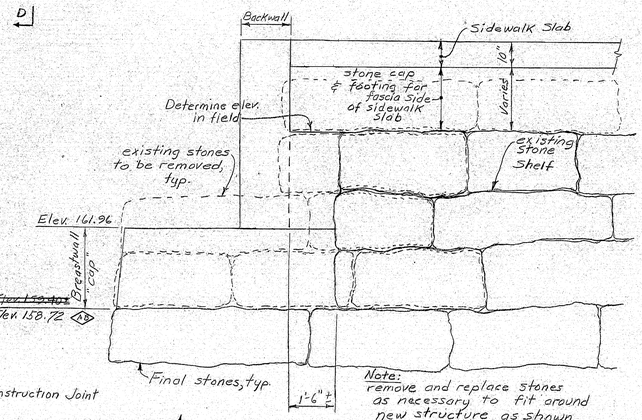
ABUT. 1 PLAN



SECTION A-A



SECTION B-B



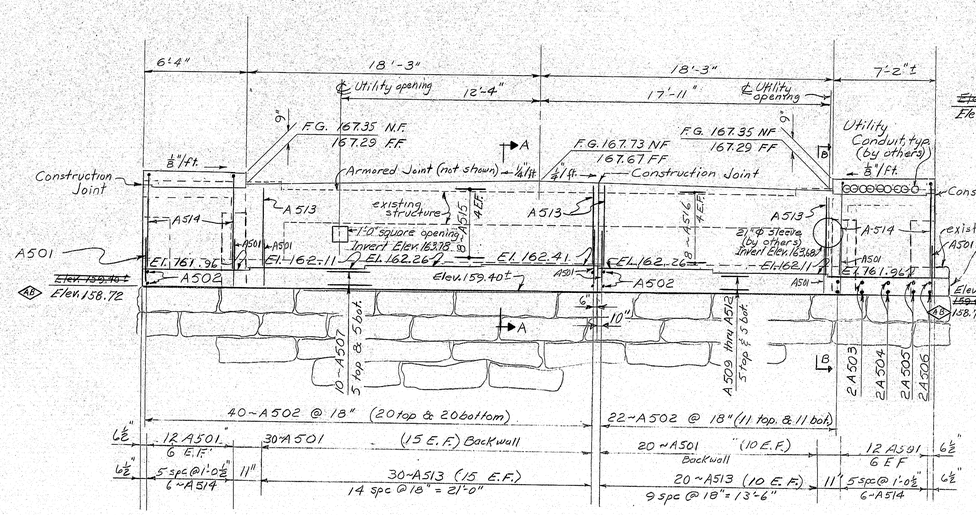
Note: remove and replace stones as necessary to fit around new structure as shown.

ELEVATION D-D

(Elevation F-F is opposite hand)

Notes:

1. Chamfer all exposed edges of concrete a consistent dimension between 1/2" & 3/4" inclusive, unless otherwise indicated.
2. Break the bond at vertical and curb contraction joints by a method approved by the Engineer.
3. Reinforcing steel shall have a minimum cover of 2" unless otherwise noted.
4. Mortar for bedding and for joints in the granite curb shall contain an approved non-shrink additive.
5. Protective coating for concrete surfaces shall be applied to the exposed surfaces of all new concrete.
6. For Armored Joint Detail see sheet #35.
7. Place reinforcing steel in the bridge seats to clear bearing plate anchor bolts.
8. For details of construction and contraction joints see Standard Sheet BD 104-73.
9. See BD 100-71 for treatment at the Bridge Seat bearing areas.
10. 21" ϕ sleeve to be supplied by the utility, installation to be incidental to item 502.21, Structural Concrete Abutments and Retaining Walls.



ABUT. 1 ELEVATION

Abutment Protection Note:

The abutment bridge seats and breastwalls shall be protected from rust staining by temporarily leaving the forms in place or by covering the concrete after removal of the forms. Polyethylene sheets of other approved impervious coating, shall be placed on and around the bearing areas prior to setting the bearing pedestals, and shall extend underneath the masonry plates such that water will run off the pedestals onto the sheets. The protective coating shall remain in place at least until completion of the structural concrete slab placement. Removal of stains will not be required unless, in the opinion of the Engineer, the contractor has not made satisfactory effort to prevent staining.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	EBC	
CHECKED	DMD	
REVISIONS	PJL	11-30
FIELD CHANGES		

JANUARY 1968

Ⓐⓑ As Built 7-5-77 DAB

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

PART - ABUTMENT NO. 1

SHEET OF AUGUSTA, MAINE

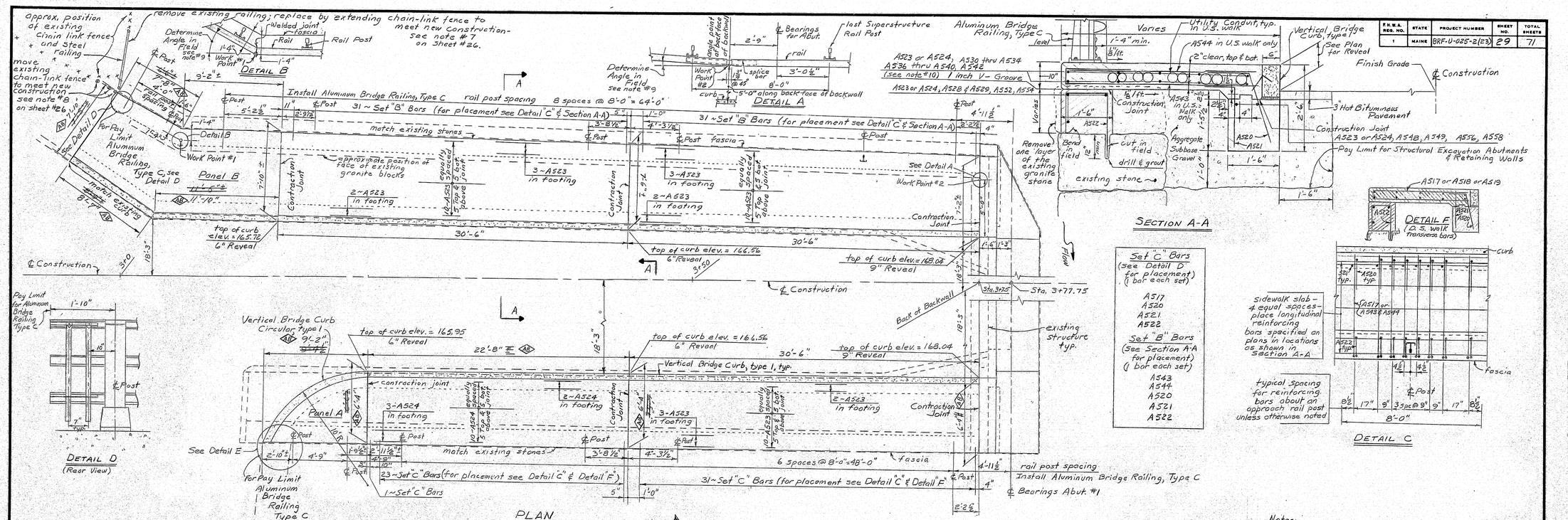
167-150

BRS-1 3000

F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	29	71

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	EBC	9/14/73
CHECKED	DEW	11/73
REVISIONS	RJL	
FIELD CHANGES		

PLANS



Notes:

1. Provide joints in the Vertical Bridge Curb, type I, at each contraction joint in the sidewalk.
2. Chamfer all exposed edges of concrete a consistent dimension between ½" & ¾" inclusive, unless otherwise shown.
3. Reinforcing steel shall have a minimum cover of 2 inches unless otherwise indicated.
4. Place reinforcing steel in concrete sidewalk slab to clear rail post anchor bolts.
5. Protective coating for concrete surfaces shall be applied to all exposed surfaces of new concrete.
6. Mortar for grouting shall contain a non-shrink additive.
7. Drilling and grouting of dowels shall be considered incidental to Item No. 503.13
8. Remove existing side walk and curb. Install new concrete sidewalk and Vertical Bridge Curb, type I, and Aluminum Bridge Railing, type C.
9. All dimensions given are approximate and must be verified by the Contractor before starting construction.
10. For construction, contraction, & V-Groove joint details see Standard sheet BD 104-73, & for Aluminum Bridge Railing, type C see standard sheet BD 115-73, and for Vertical Bridge Curb, type I, see Standard Sheet BD 104-73.
11. For location of Bronze Pin Markers see sheet #45.

A8 As Built 7-5-77 DAE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

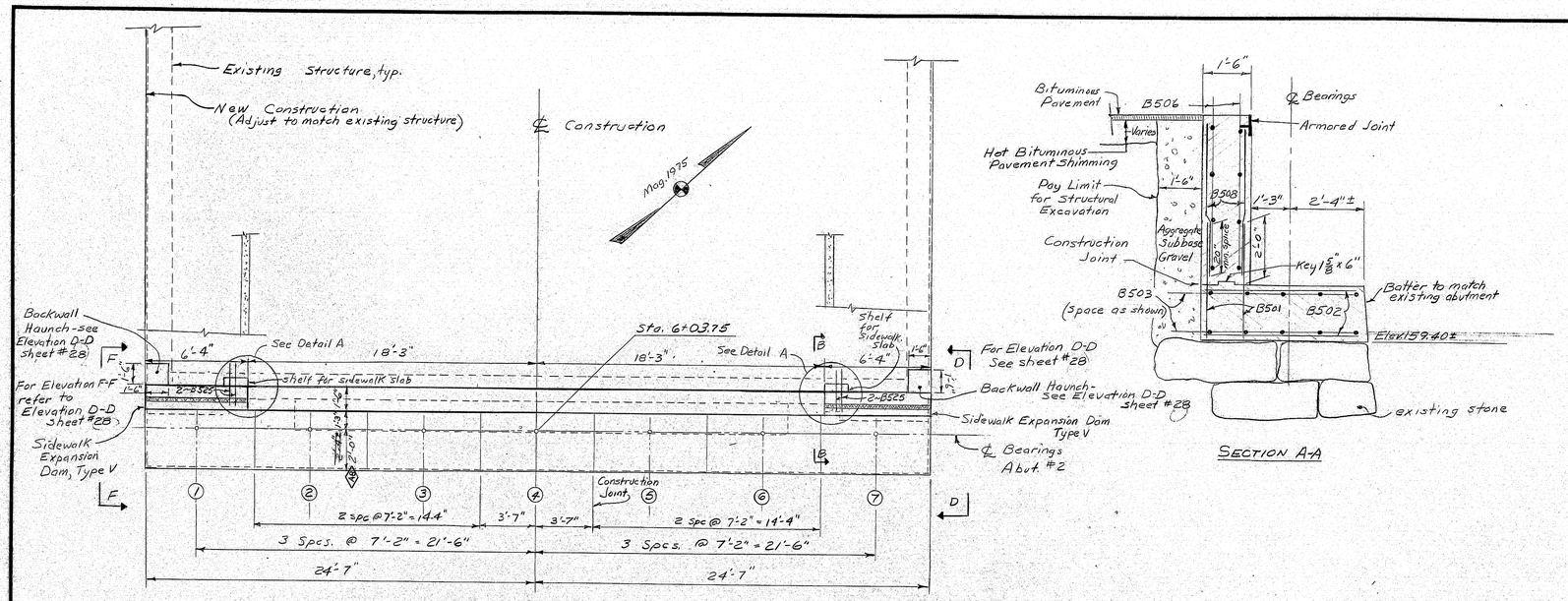
ABUTMENT NO. 1 SIDEWALKS

SHEET OF AUGUSTA, MAINE

JANUARY 1969

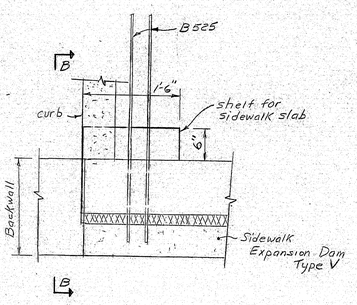
167-151

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-1-025-2(3)3	30	71



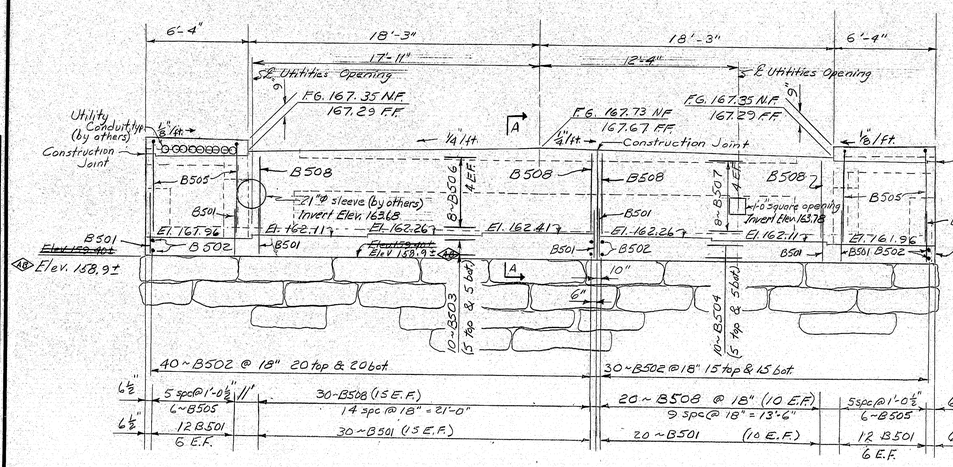
ABUTMENT No. 2 PLAN

SECTION A-A



DETAIL A

Flow



ABUTMENT No. 2 ELEVATION

Remove the existing backwall and two courses of the stones from from the existing Abutment Breastwall and replace with reinforced concrete "cap." Construct the new concrete "cap" to the exposed faces of the existing granite abutment; typ. See Elevation D-D on sheet #28

Notes:

1. Chamfer all exposed edges of concrete a consistant dimension between ½" & ¾" inclusive, unless otherwise indicated.
2. Break bond at vertical and curb contraction joints by a method approved by the Engineer.
3. Reinforcing steel shall have a minimum cover of 2" unless otherwise noted.
4. Mortar for bedding and for joints in the granite curb shall contain an approved non-shrink additive.
5. Protective coating for concrete surfaces shall be applied to the exposed surfaces of all new concrete.
6. For Armored Joint Detail see sheet #35.
7. Place reinforcing steel in the bridge seats to clear bearing plate anchor bolts.
8. For details of construction and contraction joints see Standard Sheet BD 104-73.
9. For Section B-B see sheet #28.
10. See BD 100-71 for treatment at the Bridge Seat bearing areas.
11. For abutment protection, refer to note, sheet 28

PROJECT DESIGN ENGINEER	BY	DATE
PLANS		
DESIGN-DETAILED	EBC	11-77
CHECKED	RJL	
REVISIONS		
FIELD CHANGES		

JANUARY 1968

As Built 7-5-77 DAE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

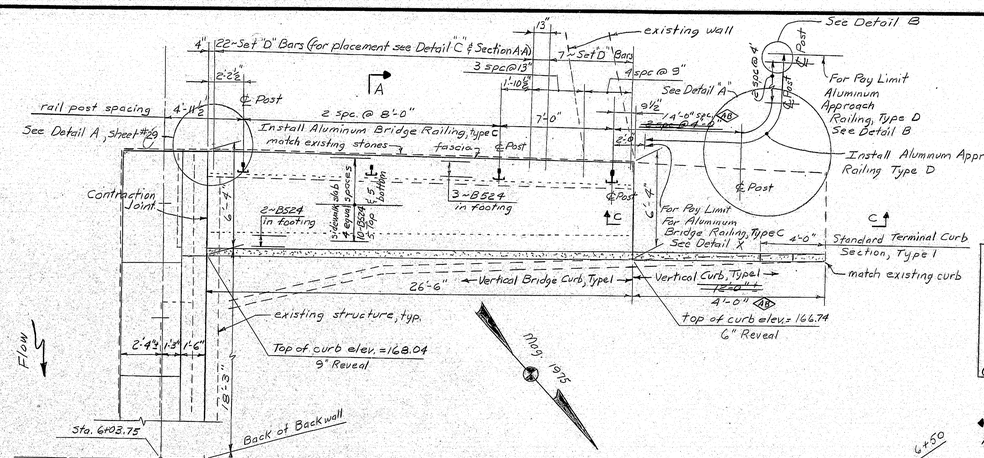
PART- ABUTMENT NO. 2

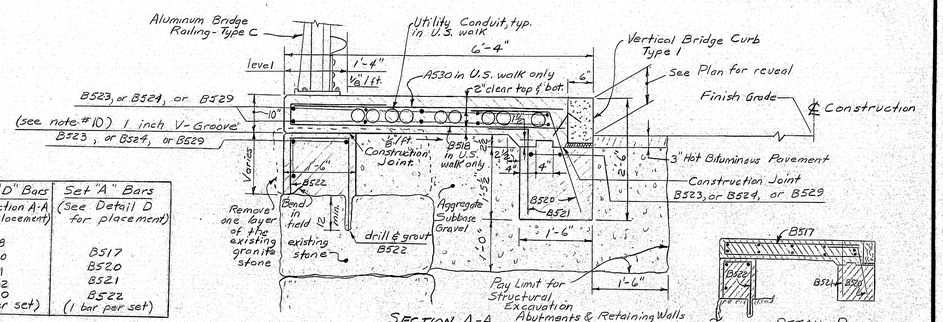
SHEET OF AUGUSTA, MAINE

167-152

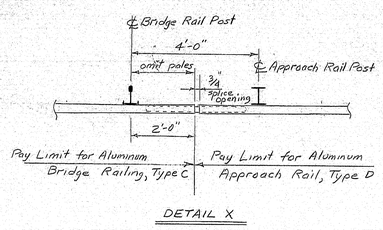
BRS-1 8000

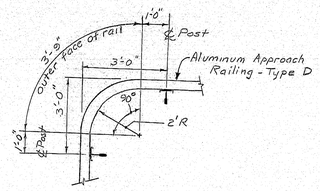
F.H.W.A. REQ. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	31	71

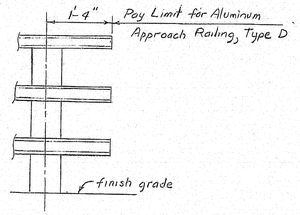


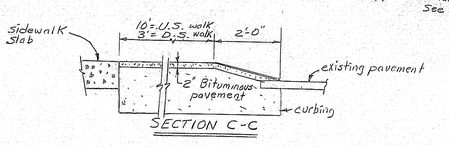


Set "D" Bars (See Section A-A for placement)	Set "A" Bars (See Detail D for placement)
B518	B517
B520	B520
B521	B521
B522	B522
B530	
(1 bar per set)	(1 bar per set)









PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	EBC / DEW	9-4-75
CHECKED	PJL	11-82
REVISIONS		
FIELD CHANGES		

PLANS

JANUARY 1968

Notes:

1. Provide joints in the Vertical Bridge Curb, type 1, at each contraction joint in the sidewalk.
2. Remove existing sidewalk and curb. Install new concrete sidewalk and Vertical Bridge Curb, type 1, and Aluminum Bridge Railing, type C, and Aluminum Approach Railing, type D.
3. All dimensions given are approximate and must be verified by the Contractor before starting construction.
4. Chamfer all exposed edges of concrete a consistent dimension between ½" & ¾" inclusive, unless otherwise shown.
5. Reinforcing steel shall have a minimum cover of 2 inches unless otherwise indicated.
6. Place reinforcing steel in sidewalk slabs to clear rail Anchor Bolts.
7. Protective coating for concrete surfaces shall be applied to all exposed surfaces of new concrete.
8. Mortar for grouting shall contain a non-shrink additive.
9. For location of Bronze Pin Markers see sheet #45.
10. Drilling and grouting of dowels shall be considered incidental to Item No. 503.13.
11. For detail of Aluminum Bridge Railing, type C, see standard sheet BD 115-73, and for Aluminum Approach Railing, type D, see standard sheet BD 118-73, and see Standard Sheet BD 104-73 for detail of Vertical Bridge Curb, type 1, and construction, contraction & V-Groove joints.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

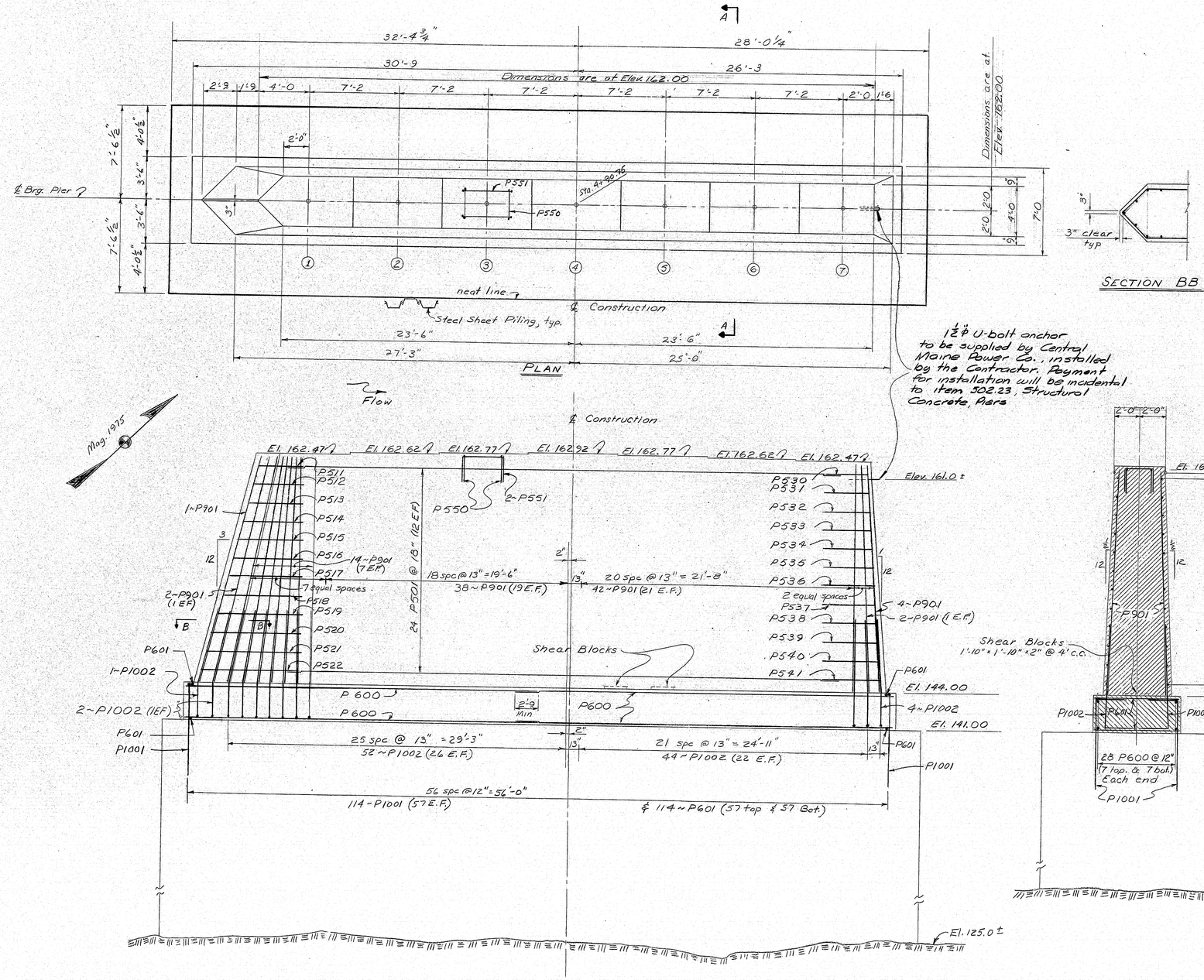
ABUTMENT NO. 2 SIDEWALKS

SHEET OF AUGUSTA, MAINE

AB As Built 7-5-77 DAB

167-153

F.A.S.S.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	32	71



PIER NOTES

1~ Chamfer all exposed edges of concrete ¾ inch unless otherwise indicated.
2~ Reinforcing Steel shall have 3 inches minimum cover unless otherwise indicated.
3~ Place reinforcing steel on bridge seats to clear anchor bolts.
4~ For details of construction and contraction joints see Standard Sheet BD 104-73.
5~ The method of placing dowels in the concrete seal shall be approved by the Engineer.
6~ Maximum calculated footing pressure equals 6.66 tons per square foot.
7~ Seal concrete dimensions are predicated on use of MP-116, DP-2, I-27 or equivalent steel sheet piling with appropriate standard rolled corners. Pay dimensions shall be to the neat lines shown plus five inches all around. Any sheet piles used shall not encroach beyond the concrete seal neat line.
8~ The depth of the seal is set for a water elevation of 162. If the water elevation at the time of construction is higher, the depth of the seal will be adjusted by the Engineer.
9~ The concrete for the pier seal shall be class S, paid for under Item 502.24.

DESIGN CRITERIA

Critical AASHO Loading - Group IX
Buoyancy - Water level assumed at elev. 162
Stream Flow - Velocity of 11. feet per second skewed at 15° to the longitudinal centerline of the pier.
Wind - 100 mph or 50 psf
Ice - 6" thick producing 400 psi. Ice pressure skewed at 15° to longitudinal centerline of pier with water El. 162.

Note: Payment for Pier Excavation will be made under Item 206.10-Structural Earth Excavation, Piers. Limit of excavation will be the pay limits for Seal Concrete. This unit price will be for all material encountered.

Pier Protection Note:
Pier surfaces above water and pier bearing areas shall be protected from rust staining. Polyethylene sheets, or other approved impervious coating, shall be placed on and around the bearing areas prior to setting the bearing pedestals, and shall extend underneath the masonry plates such that water will run off the pedestals onto the sheets. The protective covering shall remain in place at least until completion of the structural concrete slab placement. Removal of stains will not be required unless, in the opinion of the Engineer, the Contractor has not made satisfactory effort to prevent staining.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN - DETAILED ERC	4-1975
	CHECKED D.M.D.	
	REVISIONS R.J.C.	11-25
	FIELD CHANGES	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

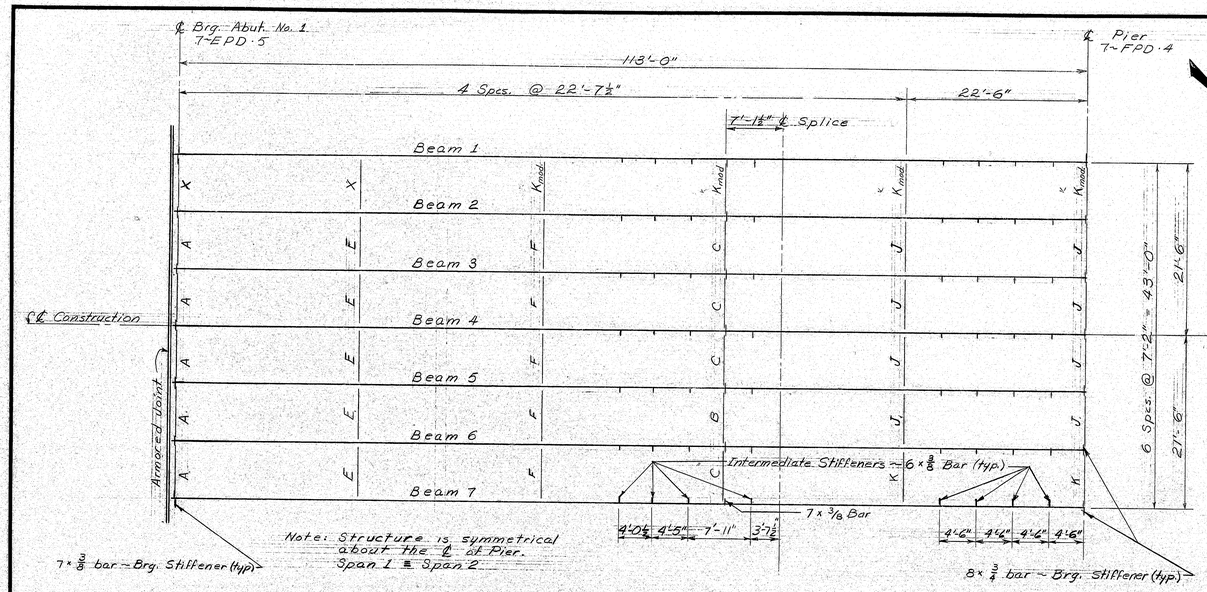
SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY
PIER

SHEET OF AUGUSTA, MAINE

JANUARY 1969

167-154

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	33	71

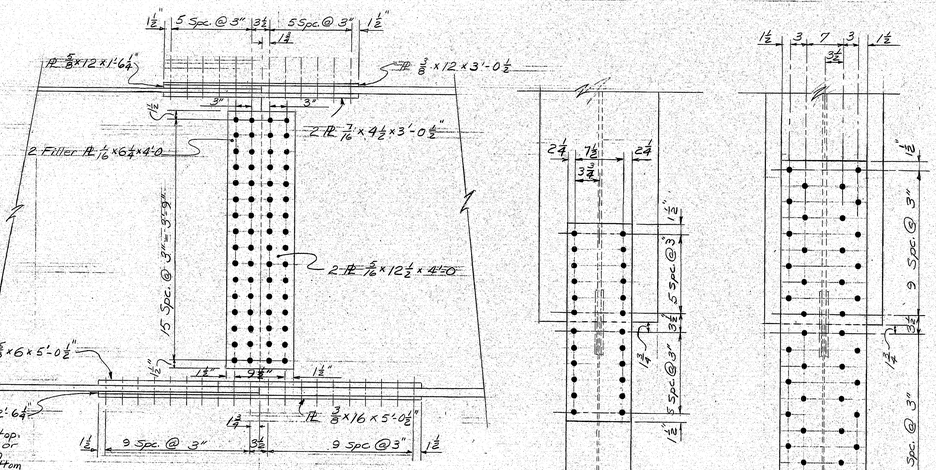


HALF FRAMING PLAN
Span 1

May 1976

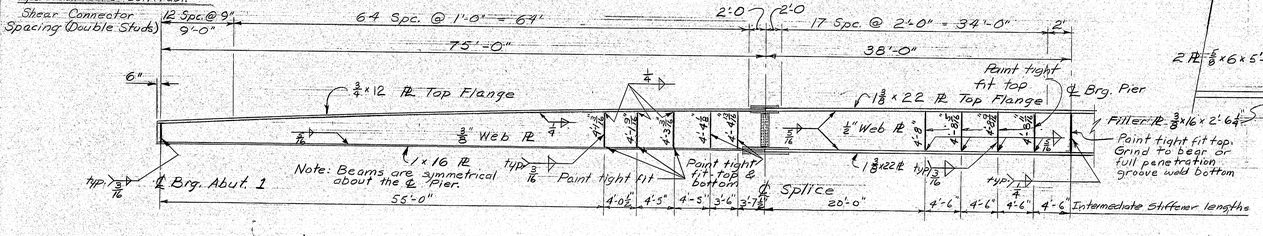
FABRICATION NOTES

1. — All structural steel shall be ASTM A588.
2. — All dimensions are horizontal or vertical.
3. — All bolts shall be ⅞" dia. A325 Type 3 H.S. Bolts. Holes for bolts shall be 15/16" dia.
4. — Camber ordinates, as shown on sheet #34, are computed to compensate for all dead load deflections and for the curvature of the finish grade profile.
5. — No transverse butt weld splices in the flange plates or web plates within 10 feet from the points of maximum stress will be allowed.
6. — Sections of flange plates or web plates between transverse butt weld splices or from field splices shall be not less than 20 feet in length unless otherwise noted on the plans.
7. — Two transverse welds per piece will be allowed in the web plates. Butt weld splices in flanges shall not be closer than one foot from transverse welds in the web plates.
8. — Bearing stiffeners, intermediate web stiffeners, crossframe or diaphragm connection plates shall be normal to the bottom flange of the beam.

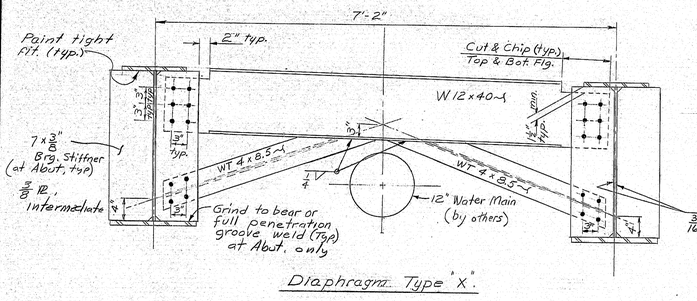


Top PLs Bottom PLs

Splice Detail



HALF BEAM ELEVATION
No. of shear connectors each beam = 380 ; Total No. = 2660
Total weight = 2660 lbs.

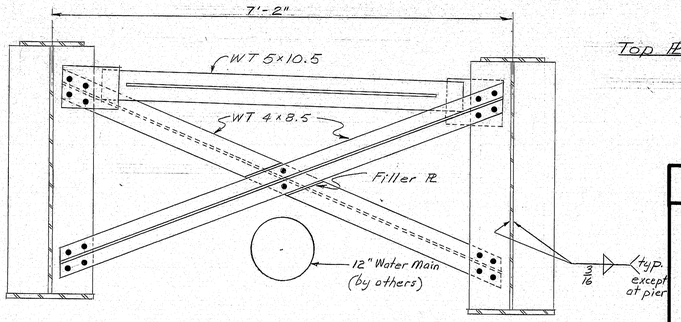


Diaphragm Type "X"

REF:
Refer to sheet #34 for blocking and camber details, stress type diagram, pedestal and expansion joint setting charts. See sheet #35 for armored joint details.

See Standard Details sheet BD113-72 for Diaphragm & CrossFrame details not shown.

Structural Steel will be supplied and delivered by the Department, and erected under this contract. Shop details of the Structural Steel will be supplied to the Contractor.



Crossframe Type K modified
See Standard Details for Type K

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED	EBC	DMD 3/1/76
CHECKED	JET	6/7/76
REVISIONS		
FIELD CHANGES		

PLANS

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

STRUCTURAL STEEL

SHEET OF AUGUSTA, MAINE

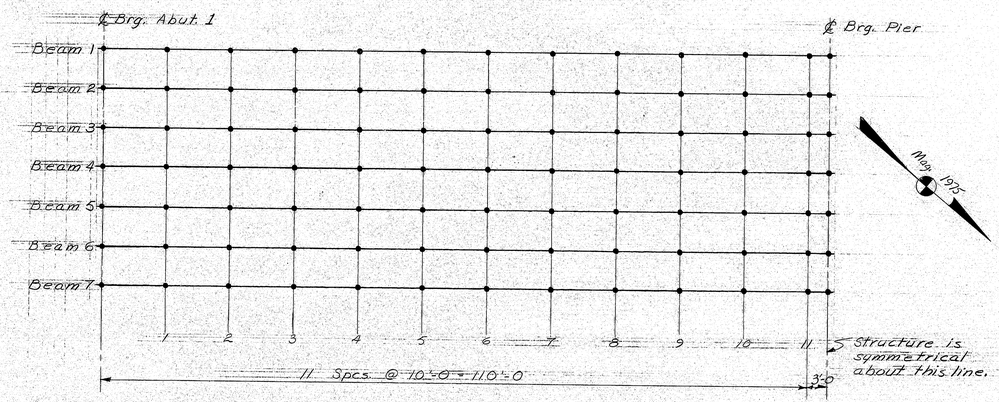
167-155

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	34	71

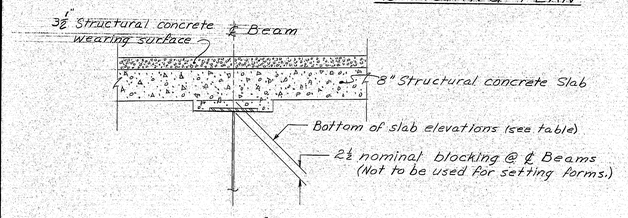
Bottom of Slab Elevations

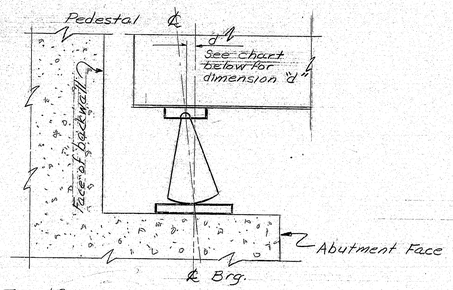
Beam \ Point	℄ Abut.	10'	20'	30'	40'	50'	60'	70'	80'	90'	100'	110'	℄ Pier
Beam 1	166.38	166.87	167.30	167.67	167.98	168.22	168.41	168.55	168.66	168.72	168.76	168.78	168.78
Beam 2	166.53	167.02	167.45	167.82	168.13	168.37	168.56	168.70	168.81	168.87	168.91	168.92	168.92
Beam 3	166.68	167.17	167.60	167.97	168.27	168.52	168.71	168.85	168.95	169.02	169.06	169.07	169.07
Beam 4	166.83	167.32	167.75	168.12	168.42	168.67	168.86	169.00	169.10	169.17	169.21	169.22	169.22
Beam 5	166.68	167.17	167.60	167.97	168.27	168.52	168.71	168.85	168.95	169.02	169.06	169.07	169.07
Beam 6	166.53	167.02	167.45	167.82	168.13	168.37	168.56	168.70	168.81	168.87	168.91	168.92	168.92
Beam 7	166.38	166.87	167.30	167.67	167.98	168.22	168.41	168.55	168.66	168.72	168.76	168.78	168.78

Note:
Bottom of slab elevations are adjusted to compensate for the dead load deflections.

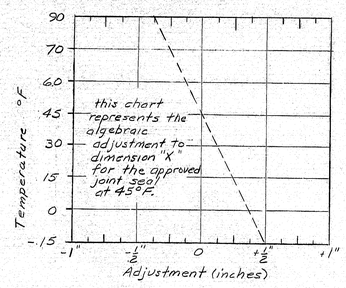


BLOCKING PLAN

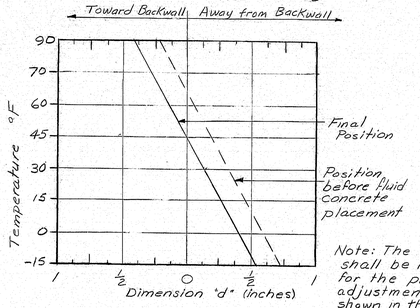




BLOCKING DETAIL

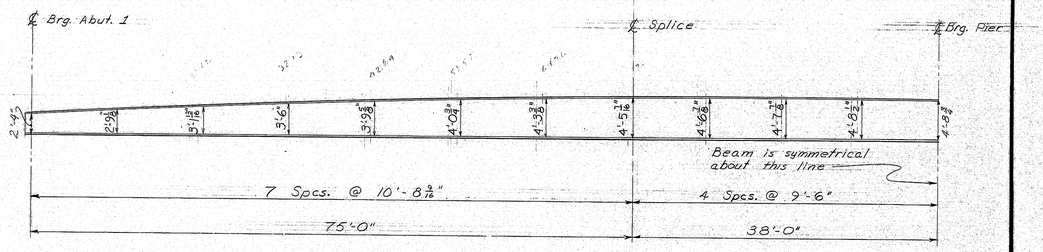


Armored Joint Adjustment Chart



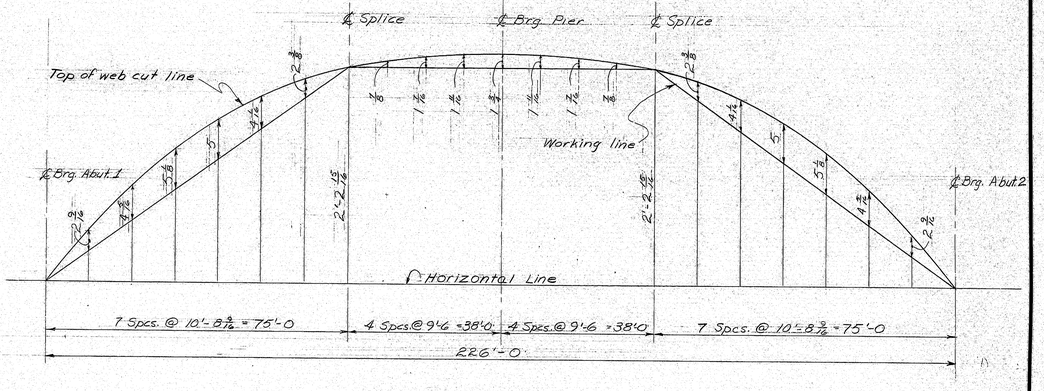
Expansion Pedestal Setting Chart

Note: The contractor shall be responsible for the proper adjustment of the pedestals, as shown in the chart above, after the superstructure slab has been placed.

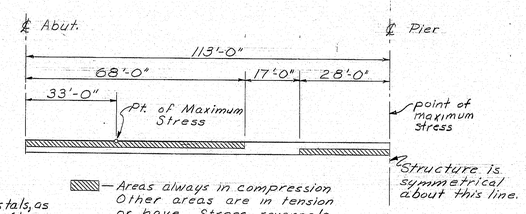


BEAM ELEVATION

Web Plate Depth
Final Profile



CAMBER DIAGRAM



Areas always in compression
Other areas are in tension or have Stress reversals

Stress Type Diagram

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	EBC	3/1/75
	CHECKED	DMD	3/1/75
	REVISIONS	JCT	9/1/75
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

BOTTOM OF SLAB ELEVATIONS

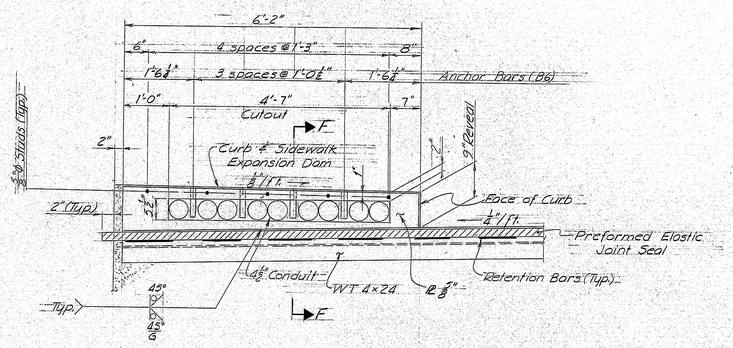
SHEET OF AUGUSTA, MAINE

JANUARY 1969

253-1 2000

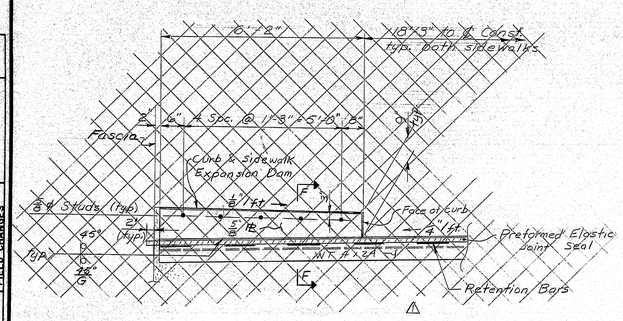
167-156

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	35	71



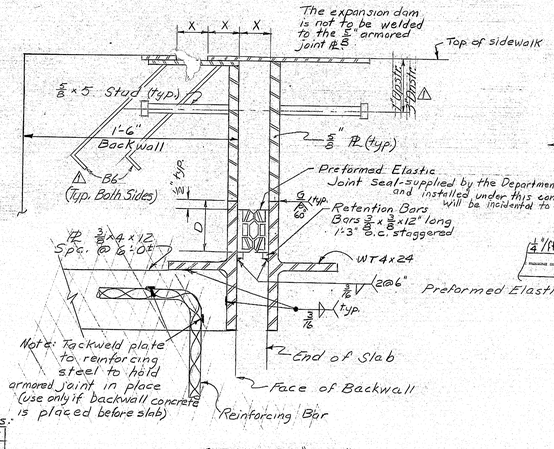
ARMORED JOINT ELEVATION - LT. SIDEWALK ⚠

The Expansion Dam is not to be welded to the 5/8" armored joint plate.



Armored Joint Elevation — Lt. Sidewalk

The Expansion Dam is not to be welded to the 5/8" armored joint plate. ⚠



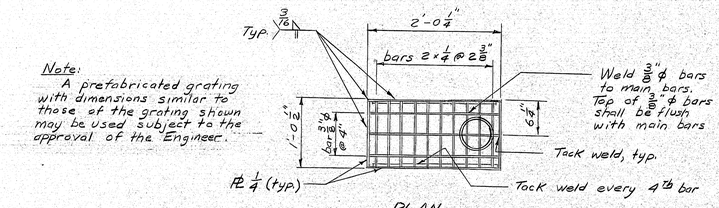
SECTION "F-F"

NOTES:

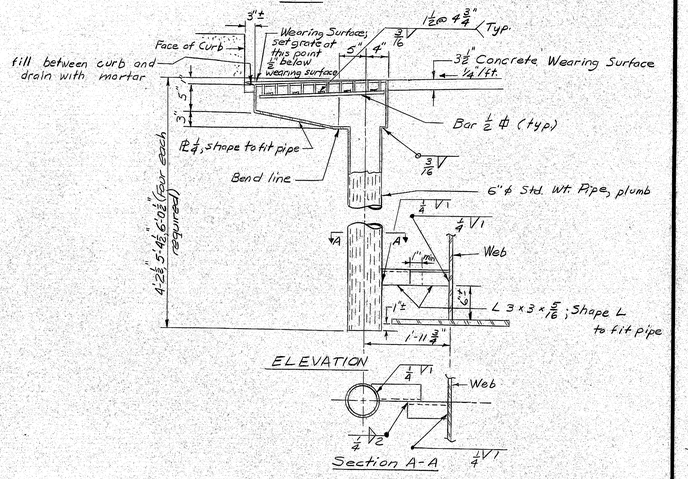
1. The seals furnished shall be as follows:

Location	Movement Rating
Abut. 1	1.5
Abut. 2	1.5

2. The seal characteristics shall be submitted to the engineer for approval prior to the fabrication of the armored joint and the dimensions "X & D" will be established by the Engineer at that time, based on the characteristics of the approved seal.
3. The maximum joint opening shall be 3" at -30°F measured parallel to the ℄ Construction.
4. It is anticipated that the joint will open 1/4" due to superstructure concrete loads.



PLAN



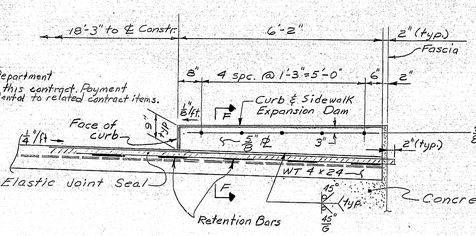
ELEVATION

Section A-A

DRAIN

(12 required)

Drains shall be ASTM A53 + A36, galvanized to conform with ASTM A123 specification (AASHTO M 111)



⚠ Revision made 10-28-75

Armored Joint Elevation — Rt. Sidewalk

The Expansion Dam is not to be welded to the 5/8" armored joint plate.

REF.

For armored joint details not shown see Standard Details sheet BD 104-73
For Curb and sidewalk Expansion Dam details refer to Standard Details sheet BD 105-74.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS	DESIGN - DETAILED: EBC, DMD	3/1975
	CHECKED: JCT	5/75
	REVISIONS	
	FIELD CHANGES	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

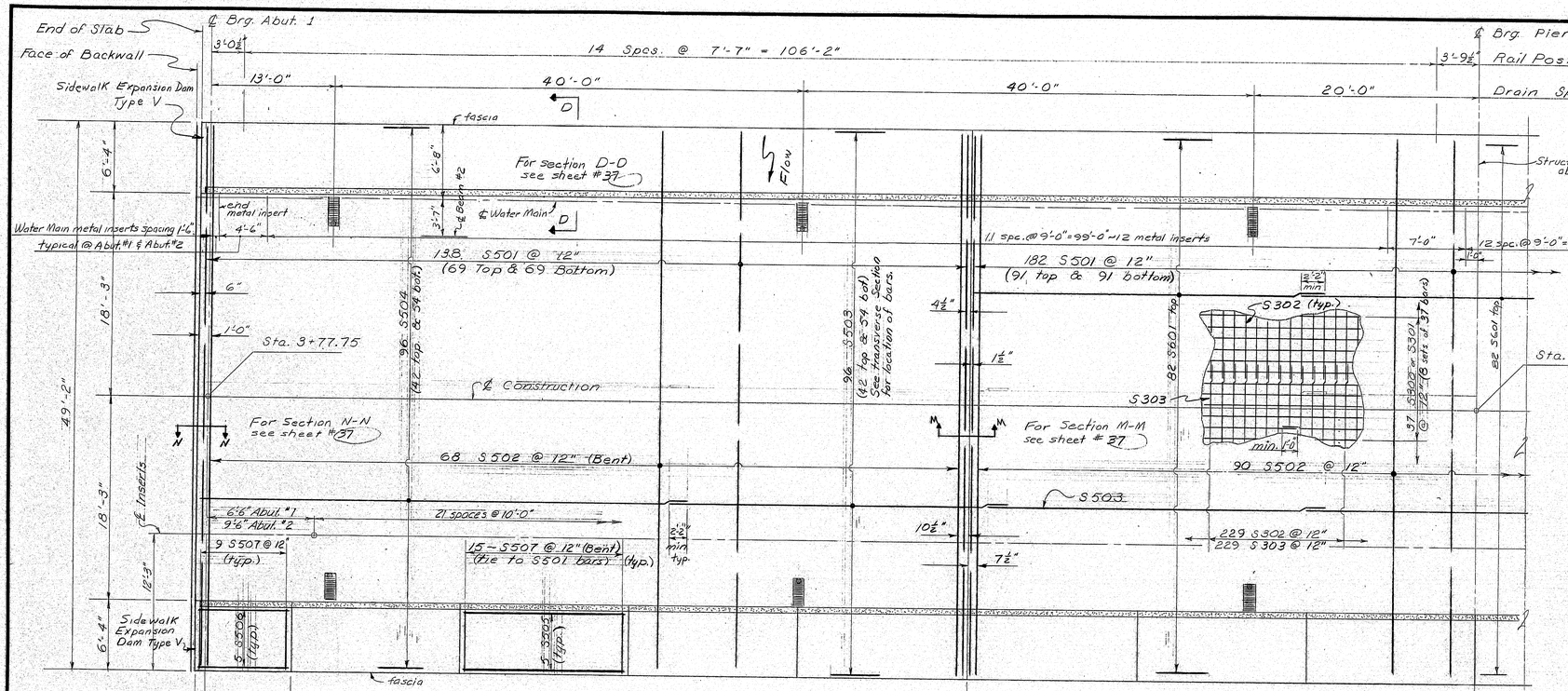
ARMORED JOINT DETAILS

SHEET OF AUGUSTA, MAINE

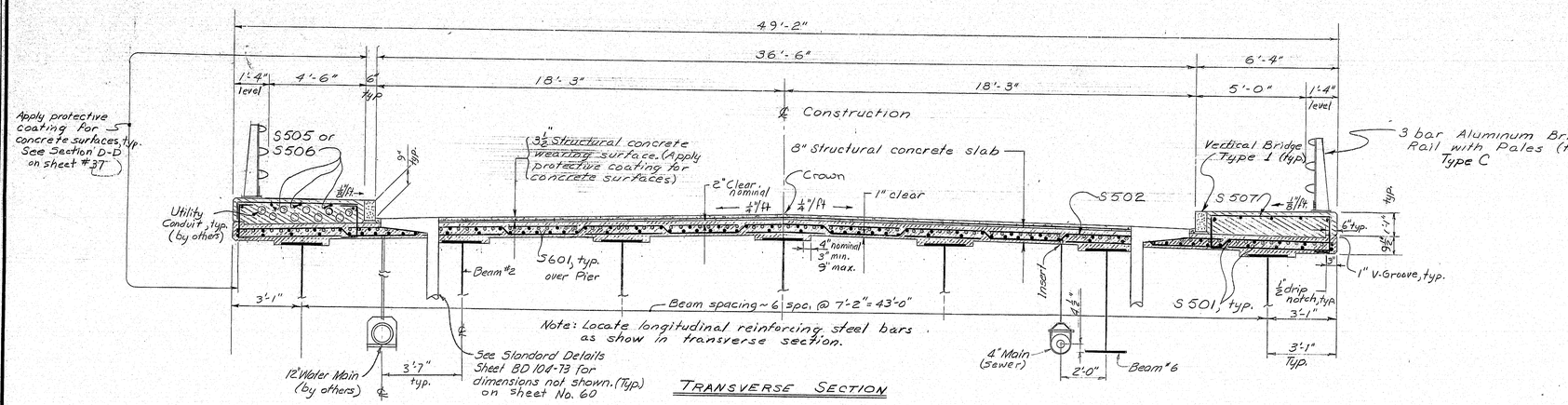
JANUARY 1969

167-157

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	36	71



SUPERSTRUCTURE PLAN



TRANSVERSE SECTION

NOTES:

1. Chamfer all exposed edges ¾" unless otherwise indicated.
2. Form a ¼" V-groove on the outside faces of each contraction joint in the sidewalk, at each construction joint in the slab and at the joint between the sidewalk and the slab. See Standard Detail BD 104-73.
3. Break the bond in contraction joints in the sidewalk by a method approved by the Engineer. Do not break the bond in construction joints in the superstructure slab.
4. Provide joints in the vertical Bridge curb, Type 1 at each contraction joint in the concrete sidewalk.
5. Reinforcing steel shall have a minimum cover of 2" unless otherwise noted.
6. The contractor will be allowed to drill holes in the webs of the exterior stringers for the purpose of attaching form support brackets. Location of holes shall be approved by the Engineer. After use, all holes shall be filled with corrosion resisting carriage bolts.
6. Mortar for bedding and for joints in the granite curb shall contain an approved non-shrink additive.
7. Adjust reinforcing steel to fit around drains in a manner approved by the Engineer. Do not cut transverse bars.
8. The superstructure may be placed either continuously or by panels as follows:

   Continuous Placement

   The contractors method of placement shall be approved by the Engineer. The concrete shall be kept plastic one (1) complete span back of the span being placed. The transverse slab joints and haunches shown shall be omitted. Approved set retarding admixtures shall be used when authorized by the Engineer.

   Panel Placement

   Panels "A" shall be placed before placing Panel "B". A minimum of 5 days shall elapse between placements of panels "A".
9. Metal inserts for the 12" water main are to be supplied by the utility. Metal inserts for the 4" Sewer Main shall be supplied under Section 817. Installation of all inserts shall be considered incidental to Item 502.26, Structural Concrete, Roadway and Sidewalk Slabs on Steel Bridges.

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED	EBC	4-1975
CHECKED	D.M.D.	11-75
REVISIONS		
FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

SUPERSTRUCTURE

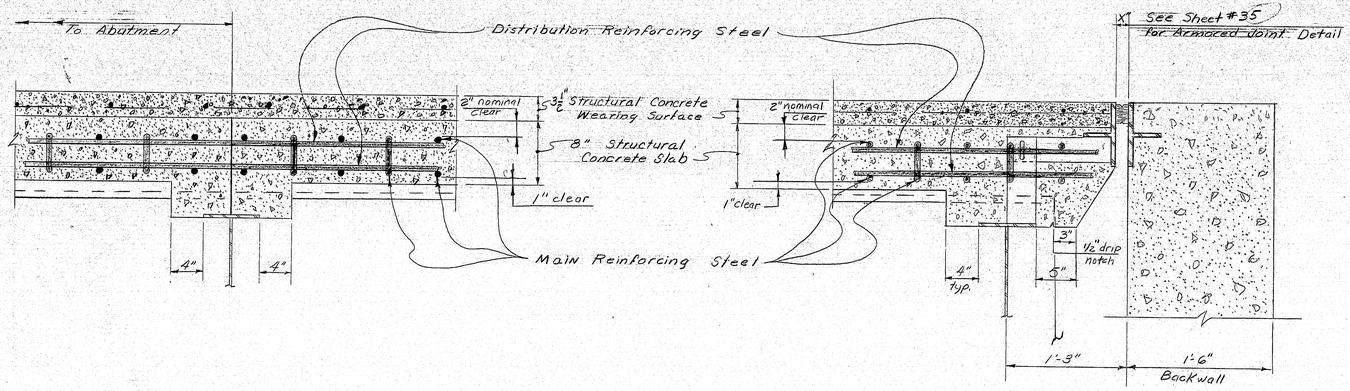
SHEET OF AUGUSTA, MAINE 1975

JANUARY 1968

167-158

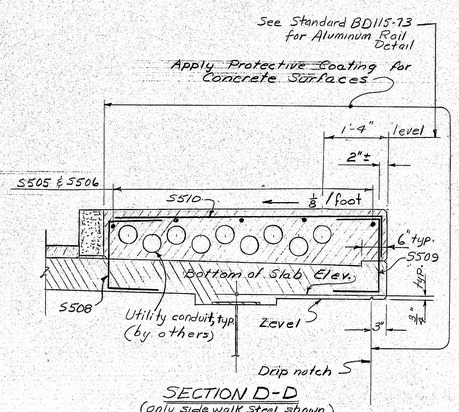
B. P. R. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(13)	37	71

PLANS	DESIGN - DETAILED	BY	DATE
	CHECKED		
	REVISIONS		
	FIELD CHANGES		



SECTION MM

SECTION NN



SECTION D-D
(only Sidewalk Steel shown)

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

SUPERSTRUCTURE DETAILS

SHEET OF AUGUSTA, MAINE 1975

JANUARY 1968

203-1 2080

167-159

REINFORCING STEEL SCHEDULE

FHWA REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	38	71

STRAIGHT BARS

MARK	NO.	LENGTH	LOCATION
ABUTMENT NO. 1			
A502	62	4'-7	A1 Breastwall
A503	2	3'-6	
A504	2	3'-0	
A505	2	2'-6	
A506	2	2'-0	
A507	10	27'-10	
A508	4	3'-0	Backwall
A509	4	22'-0	A1 Breastwall
A510	2	19'-6	
A511	2	17'-0	
A512	2	14'-6	A1 Breastwall
A513	50	4'-10	A1 Backwall
A515	8	27'-10	A1 Backwall
A516	8	20'-8	A1 Backwall
A501	74	3'-8	A1 Breastwall
A523	45	30'-0	A1 Sidewalk
A524	15	24'-6	
A528	1	17'-10	
A529	2	8'-4	
A530	2	8'-4	
A531	2	7'-9	
A532	2	6'-10	
A533	2	5'-10	
A534	2	4'-0	A1 Sidewalk
A536	2	12'-7	A1 Panel B
A537	2	11'-10	
A538	2	11'-3	
A539	2	10'-7	
A540	2	10'-0	
A542	10	9'-9	
A544	83	6'-4	A1 Panel B
A548	1	11'-6	A1 Panel A
A549	1	10'-10	A1 Panel A
A552	3	7'-5	A1 Panel B
A554	3	10'-0	
A556	2	12'-4	
A558	2	9'-8	A1 Panel B

MARK	NO.	LENGTH	LOCATION
ABUTMENT NO. 2			
B501	74	3'-8	A2 Breastwall
B502	70	4'-7	A2 Breastwall
B503	10	27'-10	A2 Breastwall
B504	10	20'-8	A2 Breastwall
B506	8	27'-10	A2 Backwall
B507	8	20'-8	A2 Backwall
B508	50	4'-9	A2 Backwall
B523	30	30'-0	A2 Sidewalk
B524	15	26'-0	A2 Sidewalk
B529	15	19'-10	A2 Sidewalk
B530	29	5'-6	A2 U.S. Sidewalk
B525	4	3'-0	Backwall

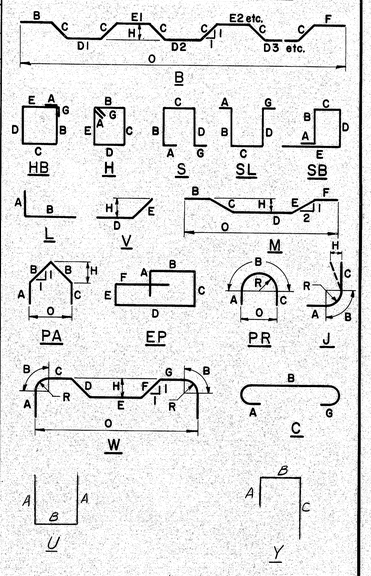
MARK	NO.	LENGTH	LOCATION
SUPERSTRUCTURE			
S300	259	30'-0	Wearing Surface
S301	37	27'-0	
S302	229	17'-6	
S303	229	20'-0	Wearing Surface
S501	458	48'-10	Deck transverse
S503	480	30'-0	Deck long.
S504	192	45'-6	Deck long.
S505	140	14'-8	Sidewalk long.
S506	20	8'-4	Sidewalk @ ends
PIER			
P501	24	46'-6	Pier Horiz. Bars
P600	28	30'-0"	Pier Distr. Slab
P601	114	6'-6	Pier Distr. Slab
P901	103	18'-3	Pier Shaft

BENT BARS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION
A518	2	8'-6	U	4'-0	0'-6"									
A514	12	12'-10	U	5'-10	1'-2									A1 Backwall
A517	60	11'-6	U	5'-6	0'-6"									A1 Sidewalks
A520	150	4'-2	V				2'-2	2'-0			1'-7½			A1 Sidewalks
A522	147	6'-8	Y	2'-0	1'-2	3'-6								A1 Sidewalks
A519	2	5'-8"		2'-7	0'-6									
B505	10	12'-10	U	5'-10	1'-2									A2 Backwall
B517	78	11'-6	U	5'-6	0'-6"									A2 Sidewalk
B520	107	4'-2	V				2'-2	2'-0			1'-7½			A2 Sidewalk
B522	107	6'-8	Y	2'-0	1'-2	3'-6								A2 Sidewalk
A543	83	8'-10	Y	2'-2	0'-6	6'-2								A1 U.S. Sidewalk
B518	29	8'-2	Y	2'-2	0'-6	5'-6								
S502	226	50'-10	B		4'-8	0'-7"	2'-10	3'-6	4'-8		0'-5"	48'-10		Deck transv.
S507	229	10'-2	S	0'-10"	1'-7	5'-6	1'-5			0'-10"				Deck Sidewalk
S508	229	3'-6"	U	1'-0"	1'-6"									
P511	1	10'-7"	PA	2'-10"	2'-5½"	2'-10"					1'-9"	3'-6½"		Pier Shaft
P512	1	11'-6"		3'-2½"	2'-7"	3'-2"					1'-10"	3'-8"		
P513	1	12'-5"		3'-6"	2'-8½"	3'-6"					1'-11"	3'-9½"		
P514	1	13'-1"		3'-9½"	2'-9"	3'-9½"					1'-11½"	3'-11"		
P515	1	13'-10"		4'-1"	2'-10"	4'-1"					2'-0"	4'-0½"		
P516	1	14'-9"		4'-5"	2'-11½"	4'-5"					2'-1"	4'-2"		
P517	1	15'-8"		4'-9"	3'-1"	4'-9"					2'-2"	4'-3½"		
P518	1	16'-3"		5'-0"	3'-1½"	5'-0"					2'-2½"	4'-5"		
P519	1	17'-0"		5'-4"	3'-2"	5'-4"					2'-3"	4'-6½"		
P520	1	17'-11"		5'-8"	3'-3½"	5'-8"					2'-4"	4'-8"		
P521	1	18'-9"		6'-0"	3'-4½"	6'-0"					2'-4½"	4'-9½"		
P522	1	19'-7"	PA	6'-4	3'-5⅝"	6'-4					2'-5⅝"	4'-11"		
P530	1	9'-2"	U	2'-0⅝"	3'-6½"									
P531	1	9'-6"		2'-11"	3'-8"									
P532	1	9'-11"		3'-0⅝"	3'-9⅝"									
P533	1	10'-3"		3'-2"	3'-11"									
P534	1	10'-8"		3'-3⅝"	4'-0½"									
P535	1	11'-0"		3'-5"	4'-2"									
P536	1	11'-5"		3'-6½"	4'-3½"									
P537	1	11'-9"		3'-8"	4'-5"									
P538	1	12'-2"		3'-9⅝"	4'-6½"									
P539	1	12'-7"		3'-11⅝"	4'-8"									
P540	1	12'-11"		4'-0⅝"	4'-9⅝"									
P541	1	13'-3"		4'-2"	4'-11"									
P550	14	6'-9"		2'-0	2'-9"									Pier Shaft
P551	14	5'-9"	U	2'-0	1'-9"									Pier Brg. Pads
S509	229	3'-7"	U	1'-0"	1'-7"									Pier Brg. Pads
S510	229	6'-6"	L	1'-0	5'-6"									
A521	149	2'-6½"	L	0'-10"	1'-8½"									A1 Sidewalk
P1001	114	9'-5"	J	1'-10"	0'-8"	6'-11"					0		5"	Seat Dowels
P1002	103	11'-0"	J	1'-10"	0'-8"	8'-6					0		5"	Distr. Slab Dowel
B521	107	2'-6½"	L	0'-10"	1'-8½"									A2 Sidewalk

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	F	G	H	O	R	LOCATION

TYPE-BENDING DIAGRAMS



All dimensions are out to out of reinf. bar

Bending details and hooks shall conform to the recommendations of ACI Standard 315-65.

Reinforcing Bar: ASTM A615 Grade 60

GENERAL NOTES

1. First digit(s) following the letter of the Mark indicates size of reinf. bar.
   Mark (A 502) bar size - #5
   Mark (P 1001) bar size - #10
   Mark (S 603) bar size - #6
2. Letter of Marks A, P & S locates bars of Abutments, Piers, and Superstructure parts respectively.

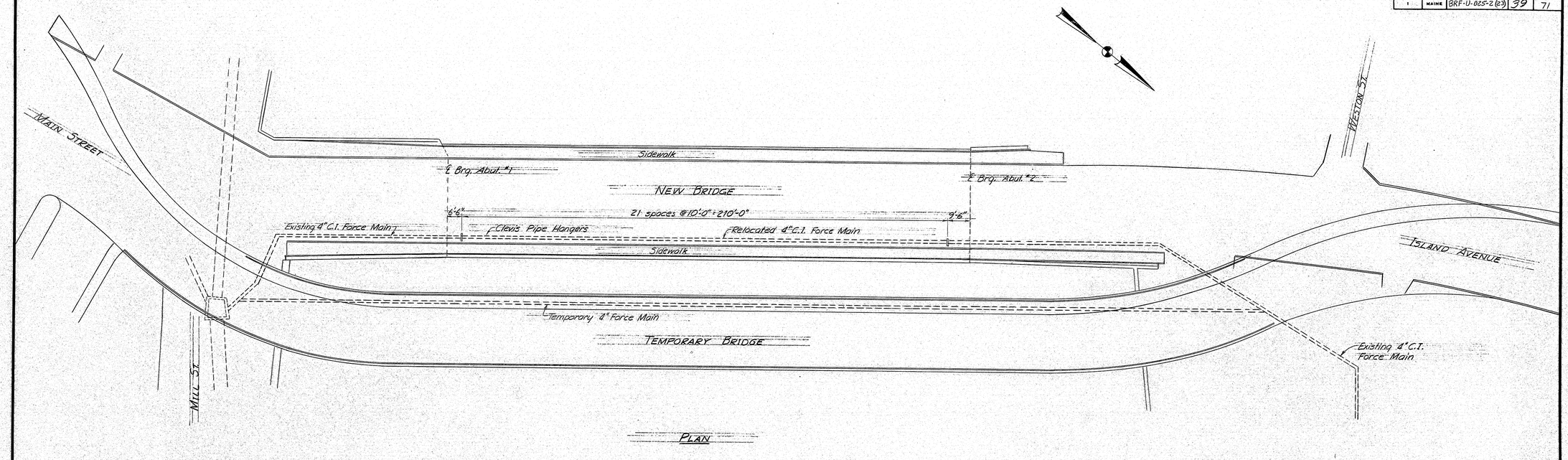
PLANS	DESIGN - DETAIL	BY	DATE
	CHECKED	EBC	11-79
	REVISIONS	AJL	
	FIELD CHANGES		

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

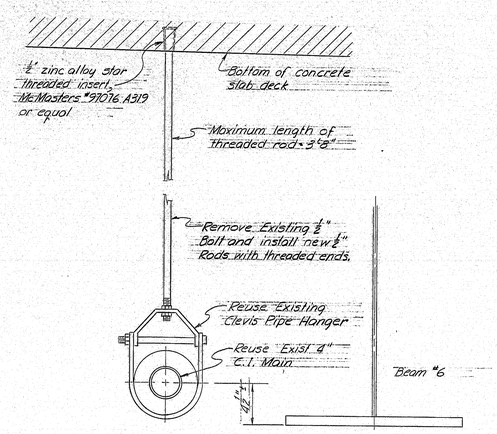
SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY
REINFORCING STEEL
SHEET OF AUGUSTA, MAINE

167-160

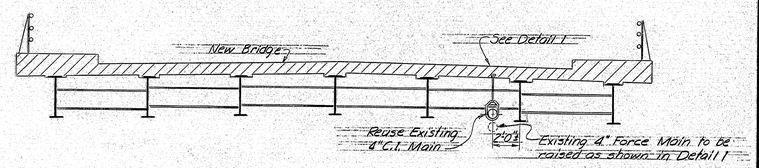
F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(63)	39	71



PLAN



DETAIL 1



TYPICAL SECTION

GENERAL NOTES

1. The relocation of the 4" cast iron force main shall be in accordance with Section 817 of the Special Provisions and will be paid for under Item 817.21, 4" Cast Iron Pressure Sewer Pipe.
2. The installation & removal of the temporary 4" force main across the temporary bridge shall be in accordance with Section 817 of the Special Provisions and will be paid under Item 817.211, 4" Temporary Pressure Sewer Pipe.
3. The existing 4" cast iron pipe, Class 150, push-on joints & mech. joint fittings may be reused. The 2" thick insulation with aluminum jacket may be reused if not damaged; damaged portions are to be replaced with material of equal quality.
4. Paint rods & hangers with one 5 mil coat of Carbomastic 15, or equal, applied per paint manufacturer's recommendations.
5. Details were taken from Kleinschmidt + Dutting plan B-929 sheet 1 of 2. Copies are available

PROJECT DESIGN ENGINEER	BY	DATE
DESIGN - DETAILED		
CHECKED		
PLANS REVISIONS		
FIELD CHANGES		

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

SOUTH CHANNEL BRIDGE
OVER THE
KENNEBEC RIVER
IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

SEWER RELOCATION

SHEET OF AUGUSTA, MAINE

353-1 8000

167-161

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	40	71

PROJECT DESIGN ENGINEER	BY	DATE
PLANS — DESIGN - DETAILED		
CHECKED		
REVISIONS		
FIELD CHANGES		

25/309

Survey Plotted 8/1/75

JANUARY 1968

Temp. Aerial Tel. Cable

Shrub Ground Cover

Gravel Parking Area

Solon Manufacturing Company

To Skowhegan

4 Story Brick Building
Solon Mfg. Co. Inc.

Paved Parking Area

36' Paved Drive

Hub nails in center of window frames

North Channel Survey Match Line

The Federated Church

Church

Grading Limits

Iron Picket Fence

245°-35'-25"
Sta. 10+97.92

11+0 ℄ Bit. Island

Paved Parking Area

Inhabitants Of The Town Of Skowhegan

Sta. 10+75 Limit of Work
Match Existing Section

Remove & Reset Fence As Directed By The Engineer As Per Item # 609.24

Sta. 7+62.00 Main Line
Sta. 10+00.00 Weston Street
℄ 36°-30'-00" to P.C.

Raymond D. Gilman
Florence L. Gilman

Paved Parking Area

Gravel Parking Area

Remove & Reset Iron Pipe Fence If Required

Remove & Reset

Sta. 10+30.73
10.00' Rt.

Weston Street

Paved Walk

Sidewalk

Granite

Bituminous

Curb

Island with Shrubbery

Gasoline Pump Island

Island with sign

Bronze Marker

Sta. 10+28.69
10.00' Lt.

1 Story conc. block "Dairy Treat"

Paved parking Area

NET&T conduit

Remove & Plug

Remove & Reset

Pavement

Grading Limits

Chevron Filling Station (closed)

Chevron Oil Company

Conc. Walk

Conc. Pad

Conc. Pad Filler Caps

Refuse Area

F.O. Tank

Concrete Posts

Fillo pipe

SMH

5' Pole with meter

Conc. slab

Overhang

2' High Metal Guard Rail

Pumping Station

Paved Parking Area

Temp. S.W. Easement

Temp. Tel. Aerial Cable

Iron Picket Fence

Guy

Stream

Stone Guard Rail

Bronze Marker

NET&T Conduit

Const. ℄

Surface

Curve #2
R.I. Sta. 10+86.45
Δ = 68°-23'-22" Rt.
D = 31°-20'-00"
T = 124.25'
L = 218.27'
R = 182.86'
E = 38.17'

3'-6" High wooden fence on concrete retaining wall

North Channel
Kennebec River

Bronze Marker

Traverse Line
N 44°-27'-57" E

Bronze Marker

Fire Station
2 Story Brick Bldg.

2½ Story wood frame

Removed 1976 by Ch. P.

Inhabitants Of The Town Of Skowhegan

Monument
Granite boulder w/ Plaque, cannon and flag pole on concrete slab.
Parcel Mark

Remove & Reset as directed by the Engineer

8" Maples

12" Elm

24" Elm

Paved Drive

Basin

Sidewalk

Remove & Plug

Remove & Reset

Sta. 8+42.40

Sta. 8+31.20

198°-22'-32.5"

N 39°-30'-W

8131.20

10+91.92

180°-01'-00"

3134.99

Channel

No. 5

7731.50

Channel

1010 Granite

Drain

13 rod Granite

Traverse Key

Curve #1
P.I. Sta. 7+65.00
Δ = 15°-34'-35" Rt.
D = 10°-00'-00"
T = 78.37'
L = 155.77'
R = 572.96'
E = 5.33'

Central Maine Power Company

Drainage Easement Limit Line

Temporary

CMP Co.

Match South Channel Survey Line

South Channel
Kennebec River

Sewer Easement to Town

S.M.H.

Manhole

Sewer Pipe

8" Sewer Main

8" Water Main

Gate Valve

Hydrant

Catch Basin

Curb Inlet

Granite

Bituminous

Concrete

Wood Picket Fence

Chain Link Fence

Stone Wall

Brook

Grass

Shrub

Maple

Elm

Pine

Spruce

Hemlock

Birch

Oak

Poplar

Willow

Cedar

Apple

Sta. 10+75 Limit of Work
Match Existing Section

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

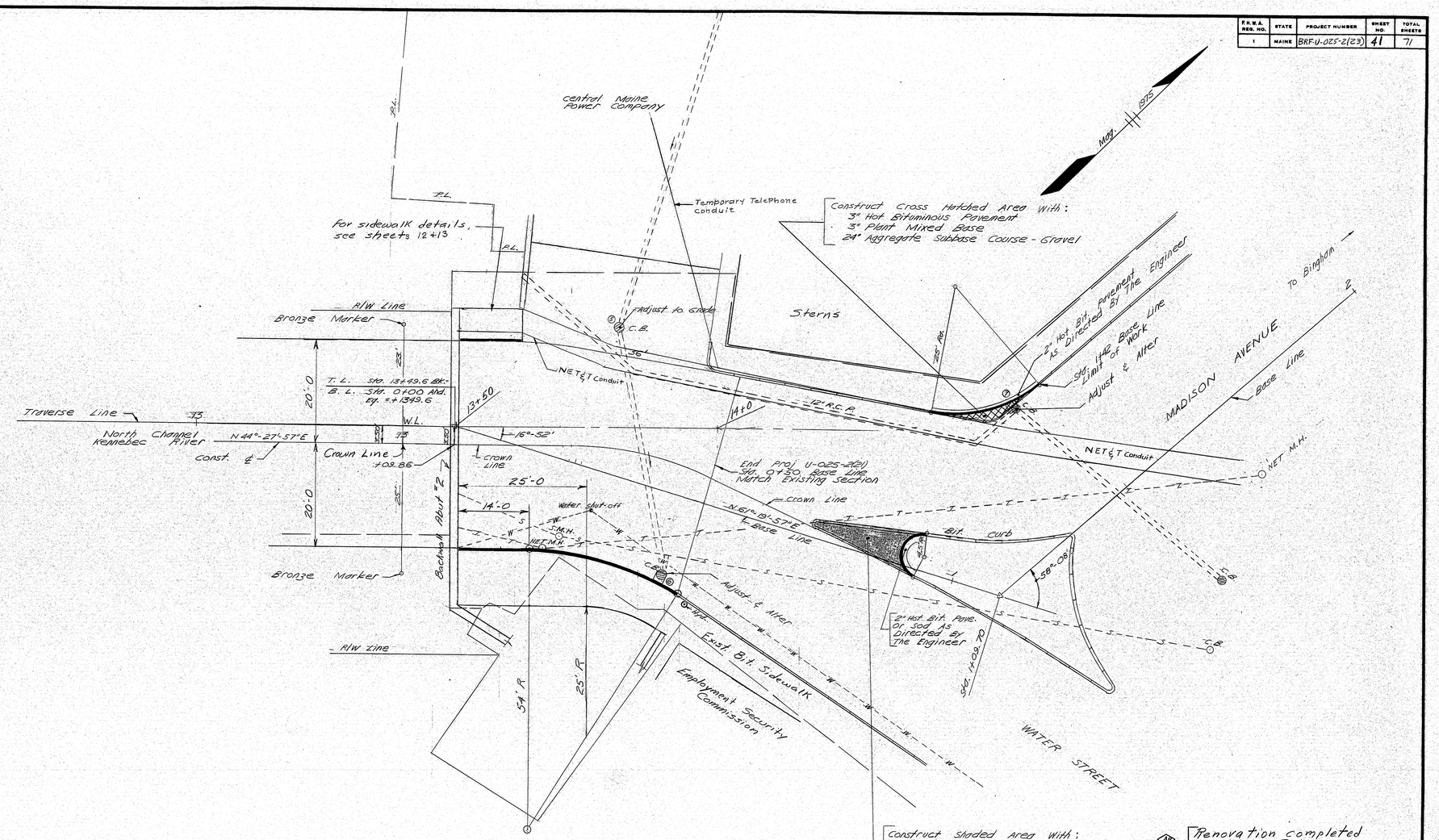
HIGHWAY
BETWEEN BRIDGES

IN THE TOWN OF
SKOWHEGAN
SOMERSET COUNTY

SHEET OF AUGUSTA, MAINE JAN. 1975

167-162

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	41	71



PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED		
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NORTH CHANNEL APPROACH

KENNEBEC RIVER

SKOWHEGAN

0 10 20 30 40
SCALE IN FEET

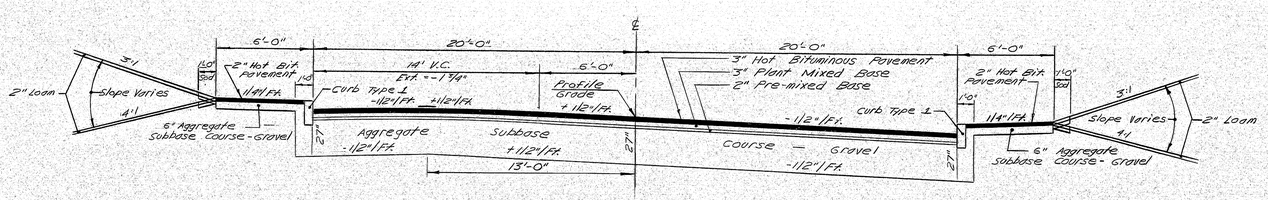
SHEET OF AUGUSTA, MAINE

SKOWHEGAN

167-163

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(63)	42	71

3" HOT BITUMINOUS PAVEMENT*

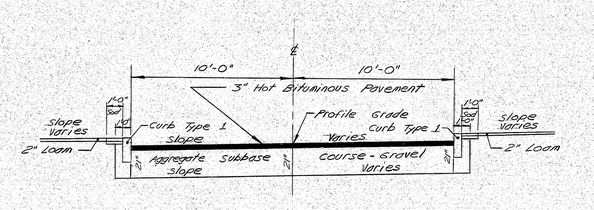


MAIN LINE

Aggregate Subbase Course - Gravel (Under Sidewalk) = 19.33 C.Y. Per 100 L.F.

2" Pre-mixed Bituminous Base (40' Wide) = 24.69 C.Y. Per 100 L.F.
27" Aggregate Subbase Course - Gravel (40' Wide) = 330.81 C.Y. Per 100 L.F.

Aggregate Subbase Course - Gravel (Under Sidewalk) = 19.33 C.Y. Per 100 L.F.



WESTON STREET

Aggregate Subbase Course - Gravel (22' Wide) = 142.08 C.Y. Per 100 L.F.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	G.W.H.	G.W.H. 7/1/25
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

JANUARY 1968

*Note:
The Pavement And Base Depths As Shown On The Plans Are Intended To Be Nominal.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
SKOWHEGAN

0 4 8 12
SCALE IN FEET

SHEET OF AUGUSTA, MAINE

167-164

1-1-1 2000

DRAINAGE

STATION	RCP			BCCMP		CMP		Option III CULVERT PIPE		CATCH BASINS							MAN HOLES	UNDERDRAINS				REMARKS
	SIZE	LENGTH	CLASS	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	A1-C	A2-C	A5-C	B2	C1	C2	E		'B' LENGTH	'C' SIZE	'C' LENGTH	'B' OUTLET LENGTH	
Main Line																						
Sta. 6+97 Lt.												1										
Sta. 7+25 Rt.											1											
Sta. 6+97 Lt. to Sta. 7+25 Rt.								12"	44'													
Sta. 6+78 Rt. to Sta. 7+25 Rt.								12"	52'													
Sta. 7+25 Rt. to Sta. 10+92 Rt.																		302'				
Sta. 10+94 Lt.										1												
Sta. 10+94 Rt.												1										
Sta. 10+94 Lt. to Sta. 10+94 Rt.								12"	34'													
Sta. 10+96 Rt. to Sta. 11+62 Rt.								12"	60'													
North Channel Approach																						
Sta. 0+24 Lt.																						Adjust C.B. to Grade
Sta. 0+46 Rt.																						Adjust & Alter C.B.
Sta. 1+35.5 Lt.																						Adjust & Alter C.B.

DRAINAGE CONT'D.

STATION	RCP			BCCMP		CMP		CULVERT PIPE		CATCH BASINS							MAN HOLES	UNDERDRAINS				REMARKS
	SIZE	LENGTH	CLASS	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	A1	A2	B1	B2	C1	C2	E		'B' LENGTH	'C' SIZE	'C' LENGTH	'B' OUTLET LENGTH	

R. P. N. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	43	71

GENERAL NOTES

1. Utilities involved in this contract are:
   Central Maine Power Company
   New England Telephone and Telegraph Company
   Skowhegan Water Company
   Town of Skowhegan (Sewers)
   Town of Skowhegan (Fire Alarm)
   All utility facilities shall be adjusted by the respective utility unless otherwise noted.

2. Driveway fill side slopes shall be 4:1.

3. All entrances and yards shall be constructed of 2" Hot Bituminous Pavement and 12" Aggregate Subbase Course - Gravel.

4. Loam depths are as follows:
   Under sod..... 2"
   Seeding Method #1.... 2"

5. Place sod strip 1 ft. wide in the following locations:
   a. Behind curb adjacent to earth slopes.
   b. Behind sidewalks adjacent to earth slopes.

6. All earth slopes shall be loamed (2" depth) and seeded method #1. Mulch shall be applied when directed by the engineer.

7. The catch basins type A1-C and type A5-C on the North Channel Approach shall have the curb inlet cut to the same radius as adjacent circular curb. Payment to be incidental to Item 604.161, Altering Catch Basins.

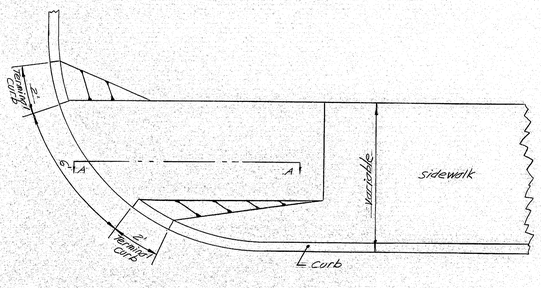
8. The two feet of Circular Curb Type 1 required to be cut for a curved terminal section as noted, will be paid for under Item # 609.23, Terminal Curb Type 1.

9. All excavation below subgrade for catch basins noted "remove & plug" shall be paid for under Common Excavation, Item # 203.20. All plugs shall be constructed of mortar as directed by the engineer. Payment shall be incidental to Item # 203.20.

10. Warning Lights shall be installed at the following locations:
    a. Beginning of project
    b. End of project

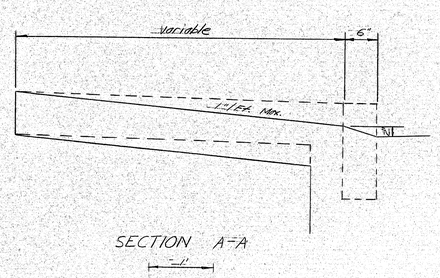
167-165

F.H.W.A. REG. NO.	STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
1	MAINE	BRF-U-025-2(23)	44	71



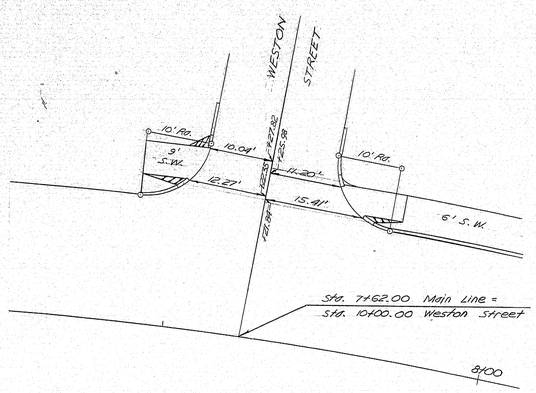
PLAN VIEW

3'



SECTION A-A

1"



LAYOUT PLAN

10'

GENERAL NOTES
for
WHEEL CHAIR RAMPS

1. There Shall Be A Minimum Of 6" Aggregate Subbase Course- Gravel Under The 2" Pavement On Wheel Chair Ramps.
2. When The Length Of The Wheel Chair Ramps Permit, The 2" Rise In The Width Of The Curb Should Be Omitted.
3. Curb Openings For Wheel Chair Ramps Shall Be 6'.

PROJECT DESIGN ENGINEER		BY	DATE
PLANS	DESIGN - DETAILED	G.W.H.	G.W.H. Oct. 25
	CHECKED		
	REVISIONS		
	FIELD CHANGES		

JANUARY 1968

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

WHEEL CHAIR RAMPS

WESTON STREET

SKOWHEGAN

SHEET OF AUGUSTA, MAINE

SKOWH 167-166